

ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA

**SCUOLA DI INGEGNERIA E ARCHITETTURA
DIPARTIMENTO DI ARCHITETTURA
CORSO DI LAUREA IN INGEGNERIA EDILE - ARCHITETTURA**

**TESI DI LAUREA
in
Recupero e Conservazione degli edifici**

**PROGETTO DI RECUPERO ARCHITETTONICO E
PRESTAZIONALE DELLA VILLA NEGRI-BIANCHETTI,
SITUATA AD OZZANO DELL'EMILIA
- Allegati -**

**Candidato:
GIACOMO SGARZI**

**Relatore:
Chiar.mo Prof. Ing. RICCARDO GULLI**

**Correlatore:
Ing. GIORGIA PREDARI**

Anno Accademico 2017 - 2018

Sessione II

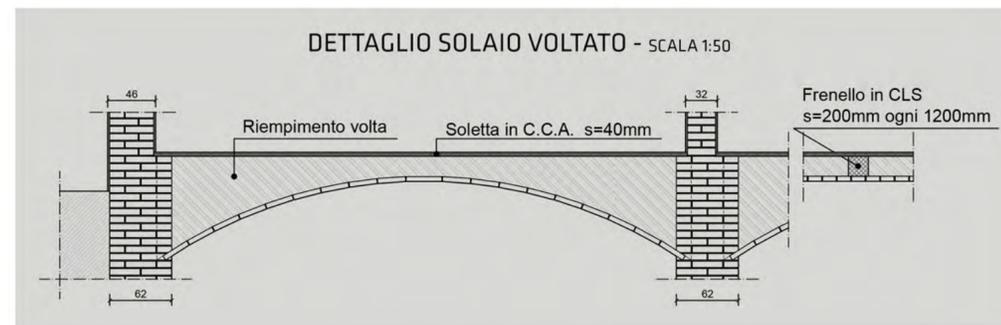
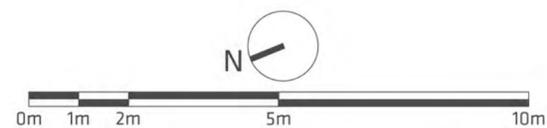
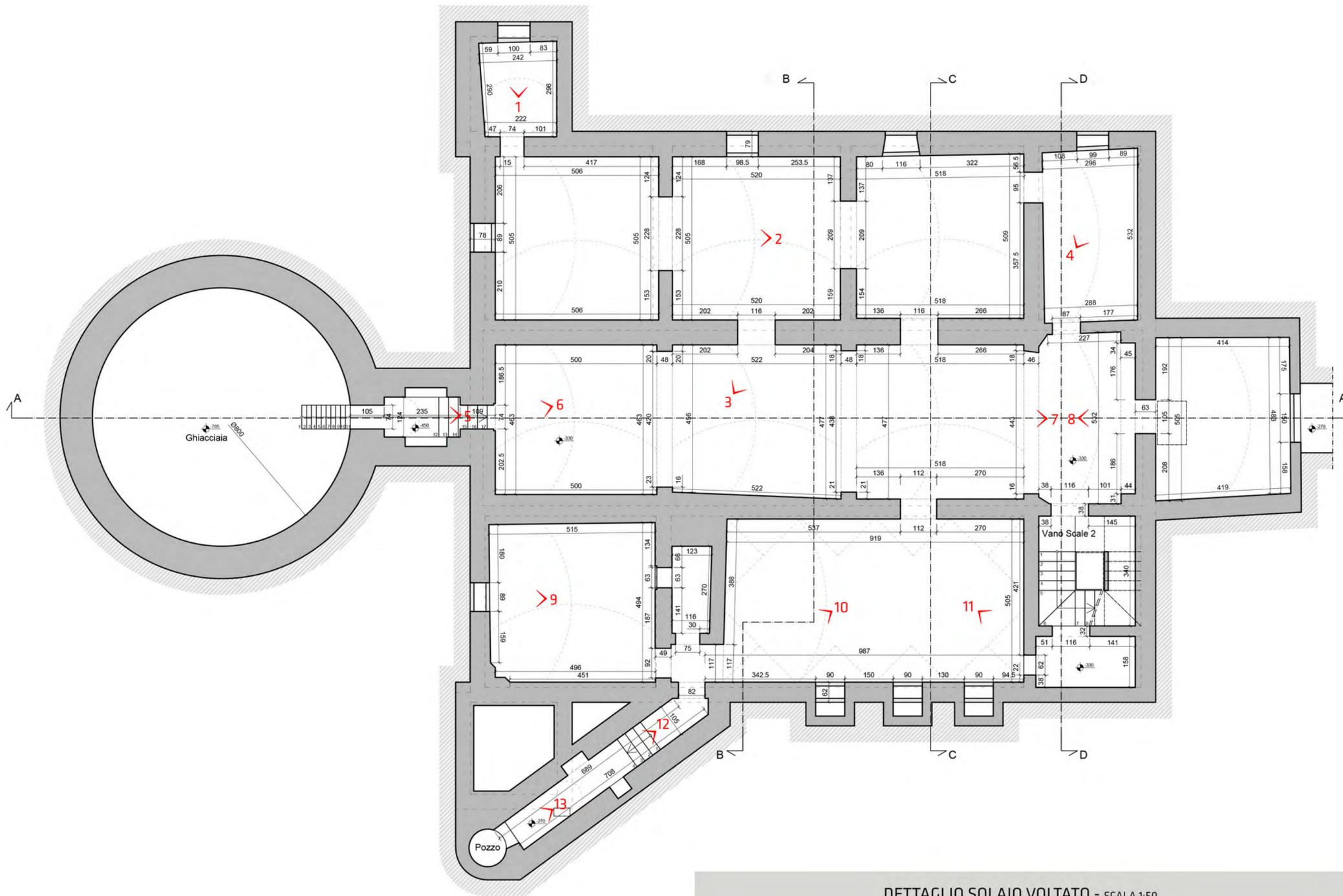
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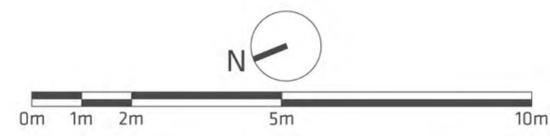
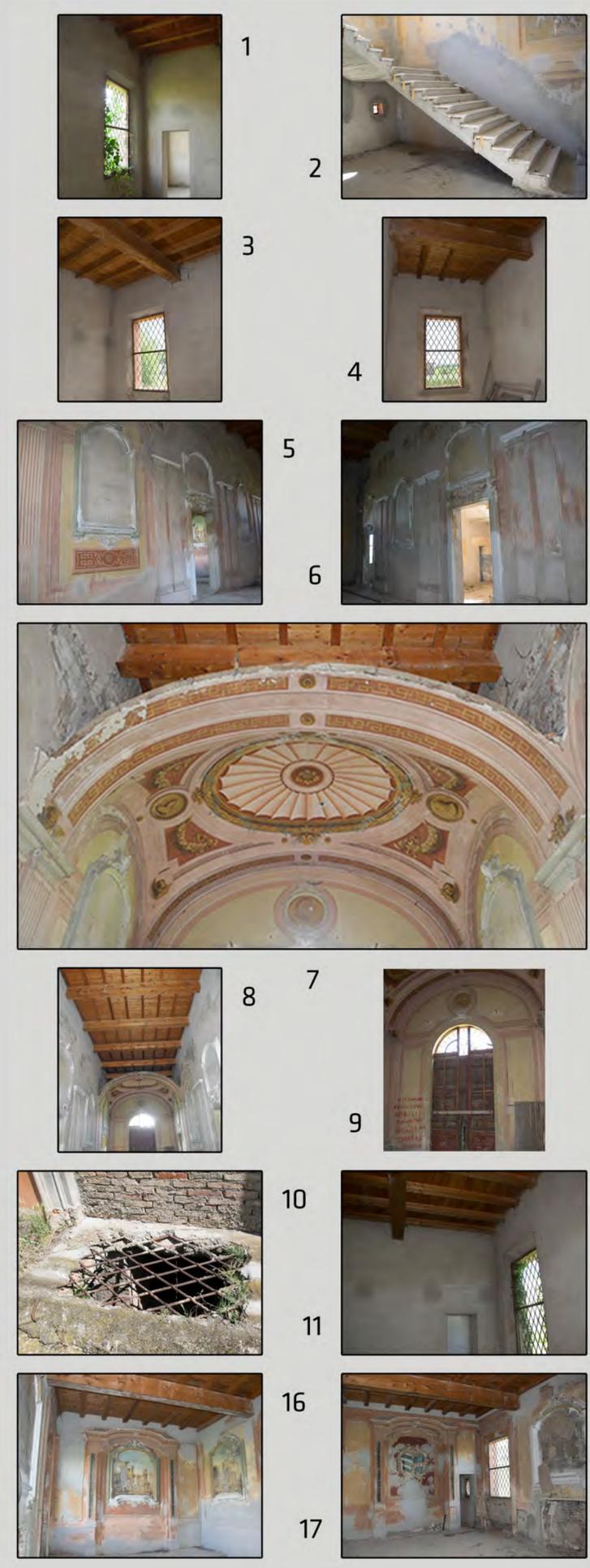
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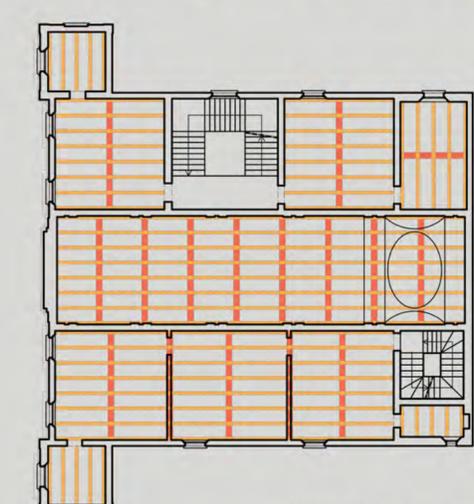
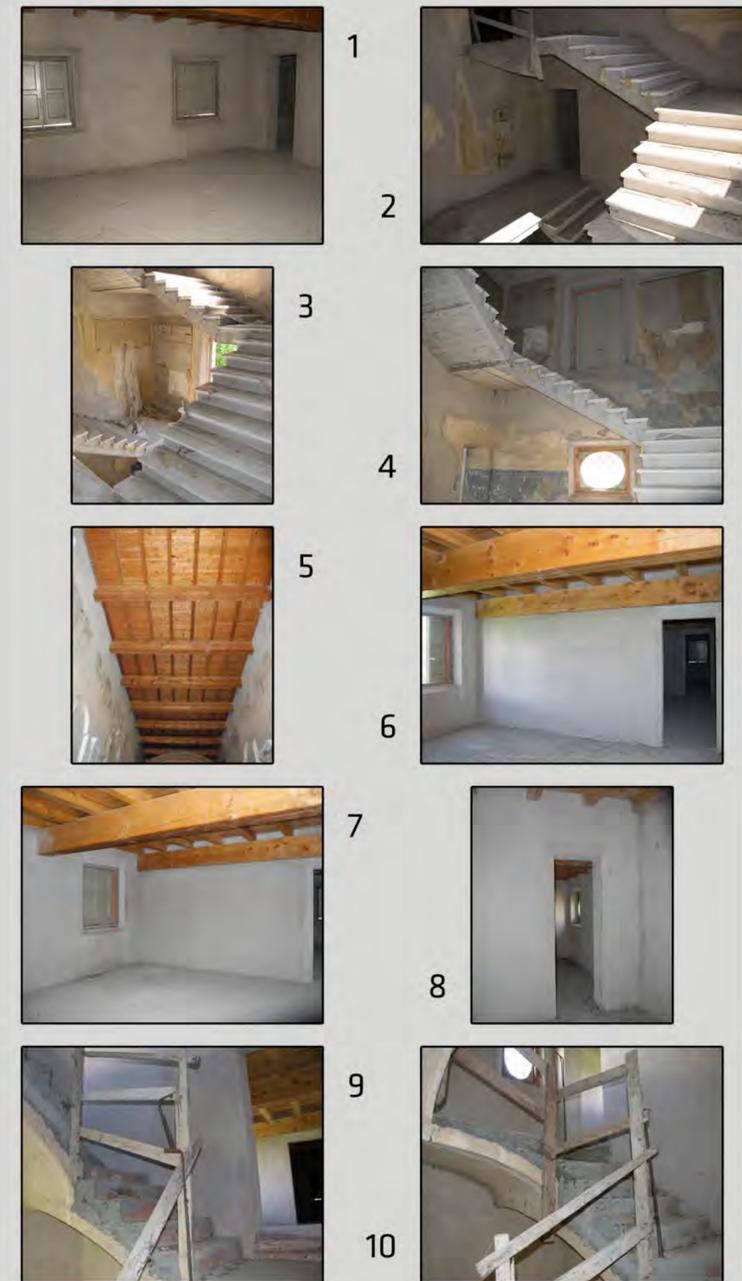
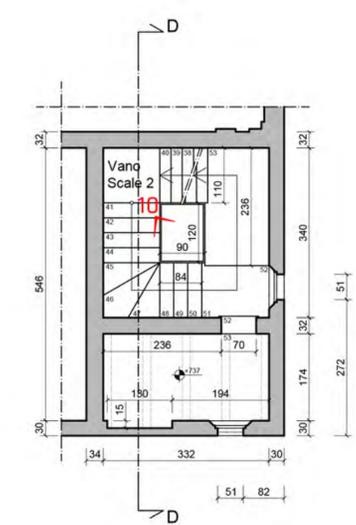
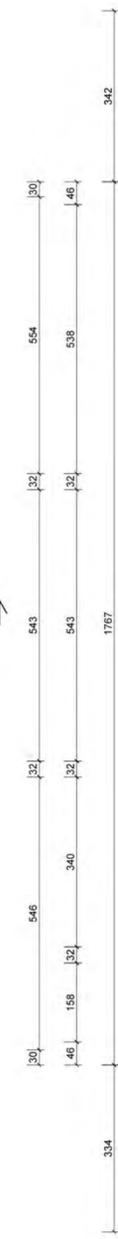
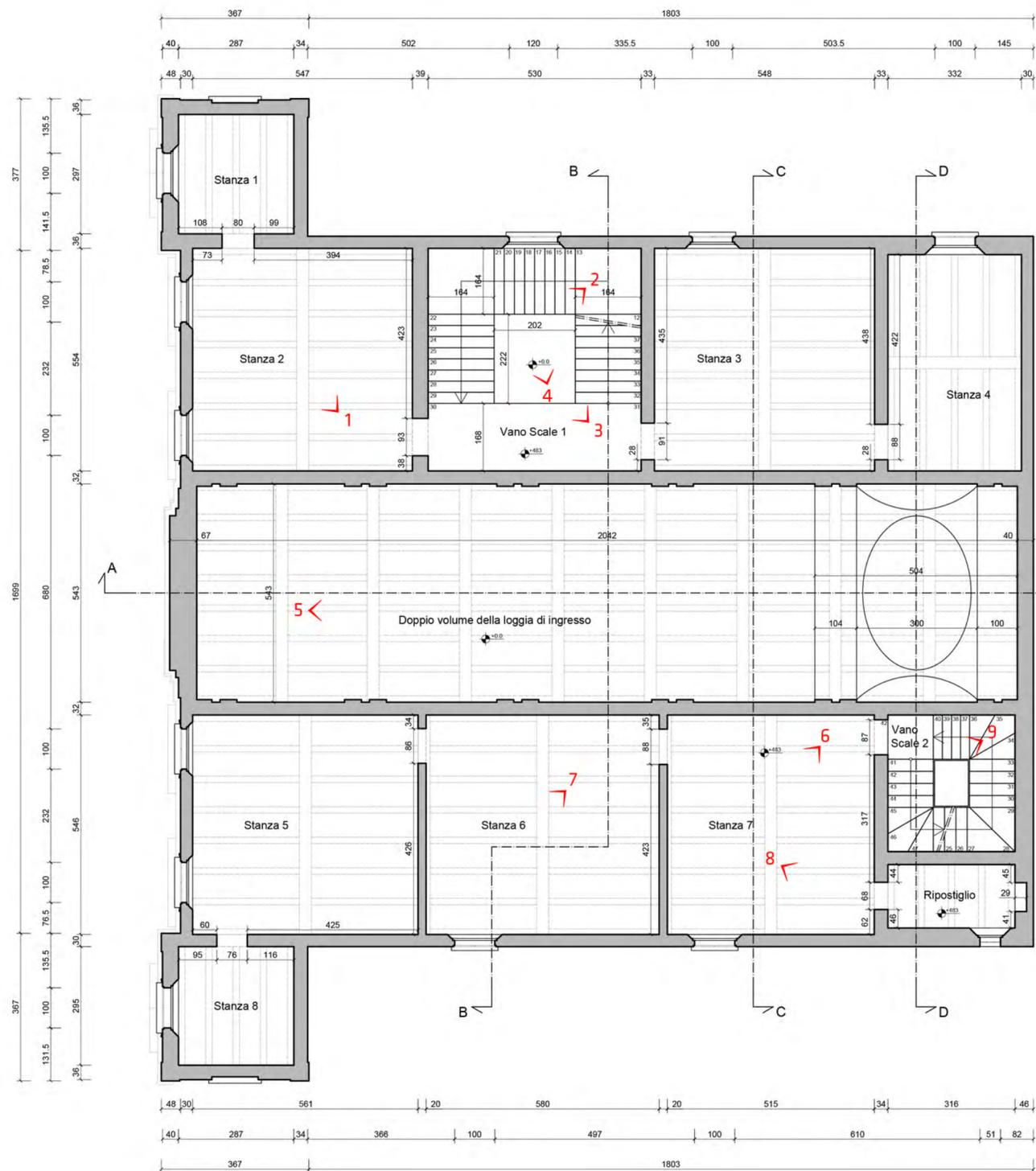
1. Pianta piano interrato
2. Pianta piano terra
3. Pianta piano ammezzato
4. Pianta piano primo
5. Pianta piano copertura
6. Sezione A-A
7. Sezione B-B, sezione C-C, sezione D-D
8. Prospetto Nord
9. Prospetto Ovest, prospetto Sud, prospetto Est

Stato di progetto:

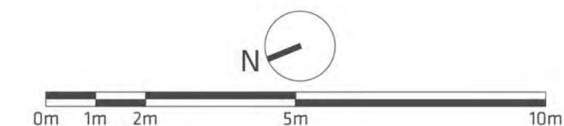
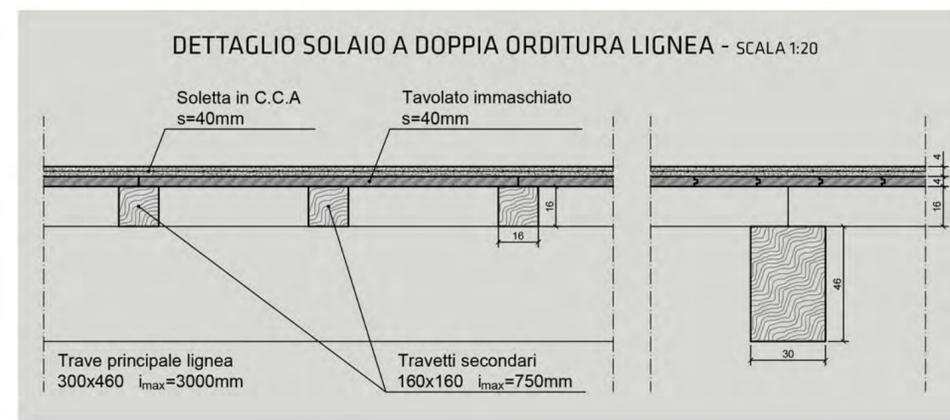
10. Masterplan
11. Pianta piano interrato
12. Pianta piano interrato
13. Pianta piano terra
14. Pianta piano terra
15. Pianta piano ammezzato e primo
16. Pianta piano ammezzato
17. Pianta piano primo
18. Sezione A-A
19. Sezione B-B, sezione C-C, sezione D-D
20. Prospetto Nord
21. Prospetto Ovest
22. Prospetto Sud
23. Prospetto Est
24. Chiusure e aperture di vani nelle pareti portanti
25. Portale controvento piano terra
26. Portale controvento piano ammezzato
27. Portale controvento piano primo
28. Cordoli esterni e collegamento ascensore – scale
29. Passerella vetro – acciaio piano ammezzato
30. Progetto del sistema di ventilazione interna controllata – pianta piano interrato e terra
31. Progetto del sistema di ventilazione interna controllata – pianta ammezzato interrato e primo
32. Progetto del sistema di ventilazione interna controllata – sezione A-A e sezione B-B
33. Progetto del sistema di ventilazione interna controllata – sezione C-C e sezione D-D
34. Progetto di prevenzione incendi - pianta piano interrato e piano terra
35. Progetto di prevenzione incendi - pianta piano ammezzato e primo

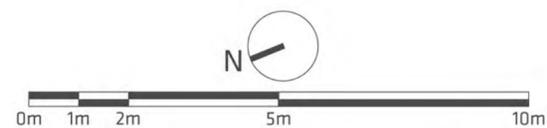
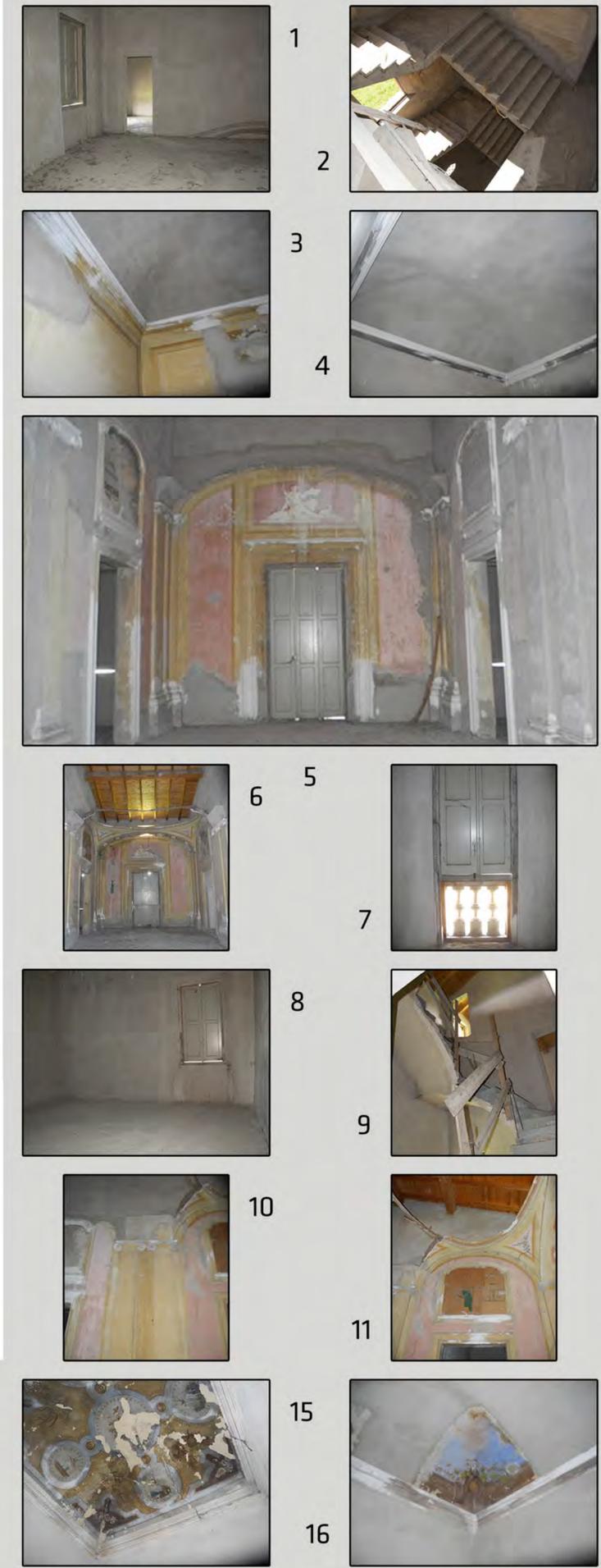
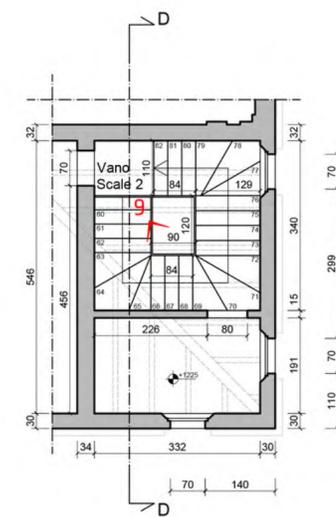
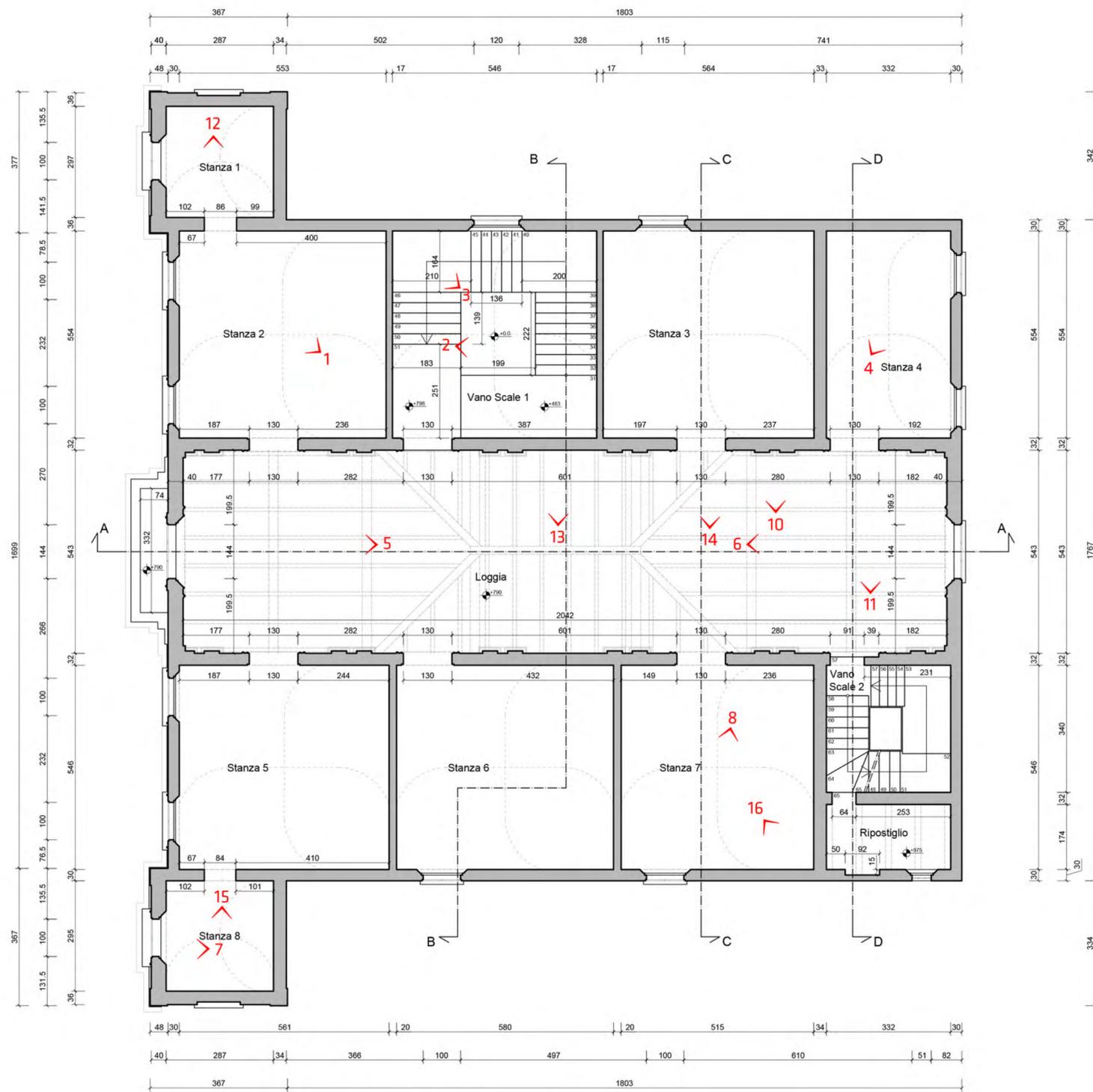


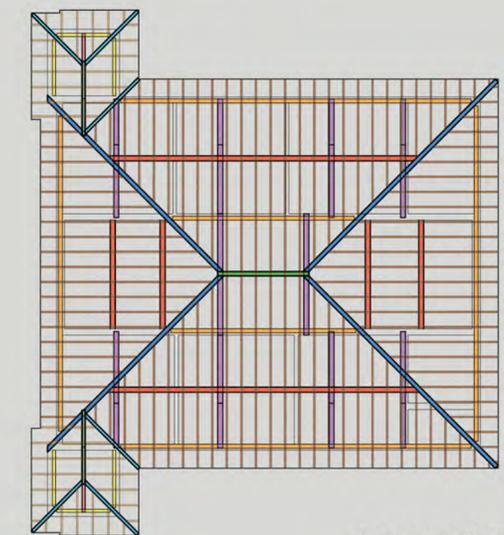
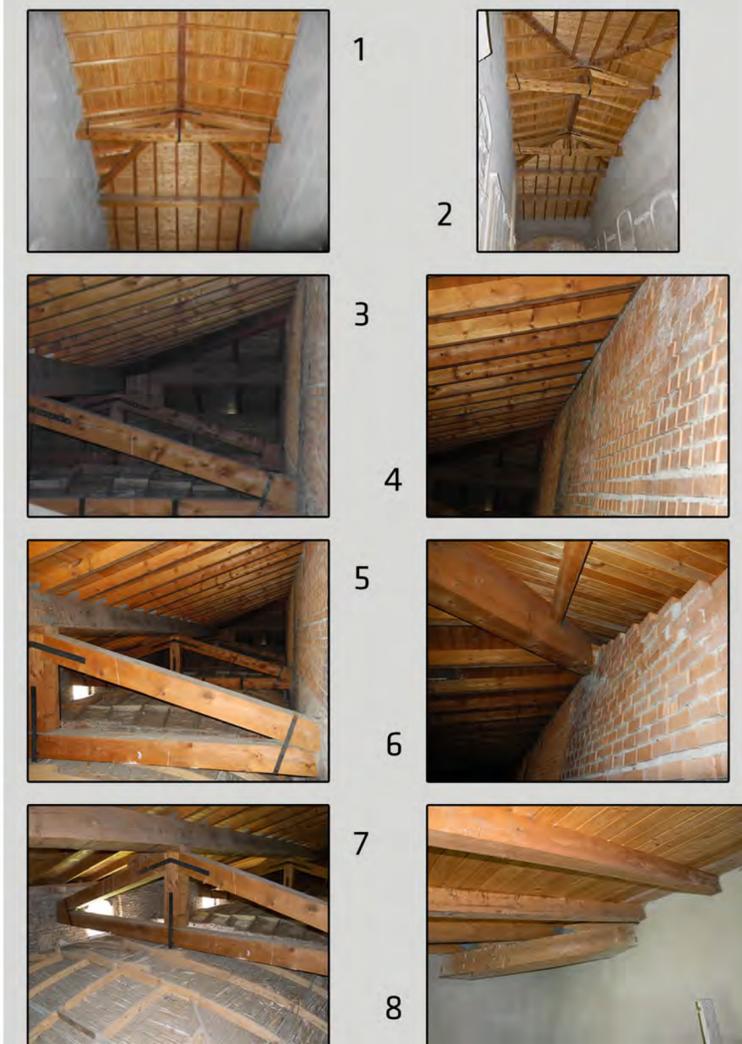
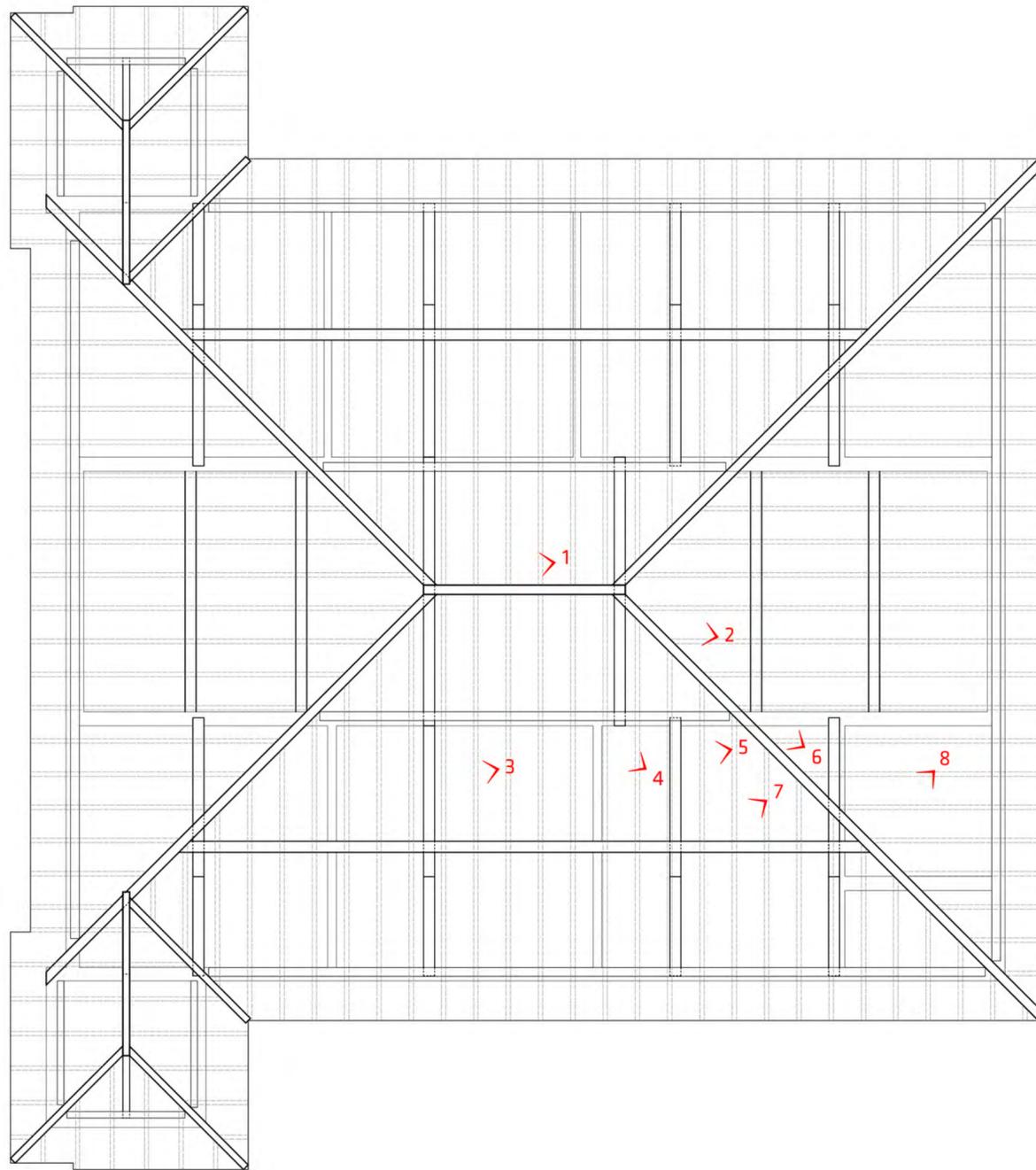




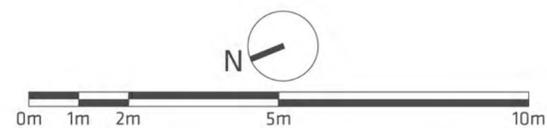
Orditura solaio ligneo:
 Solaio tra piano ammezzato e piano primo
 ■ Travi principali, 30x46cm
 ■ Travetti secondari, 16x16cm

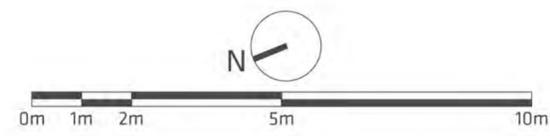
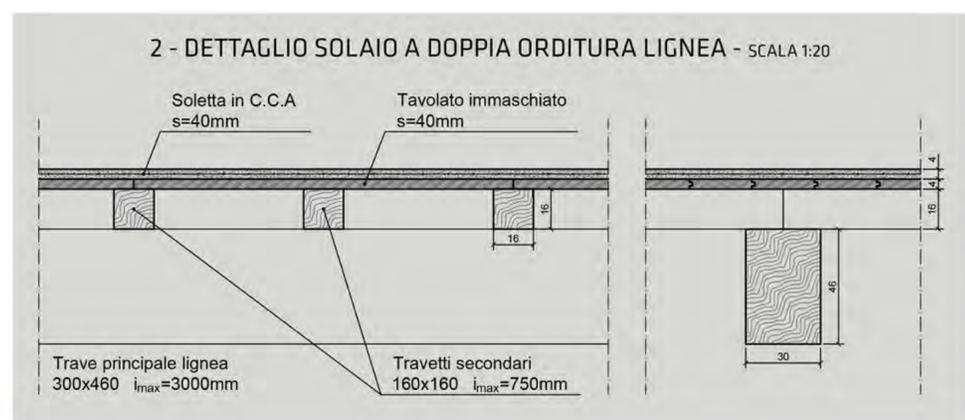
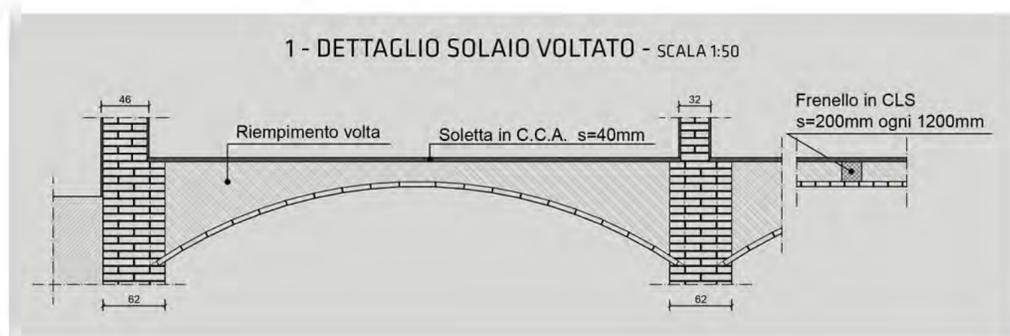
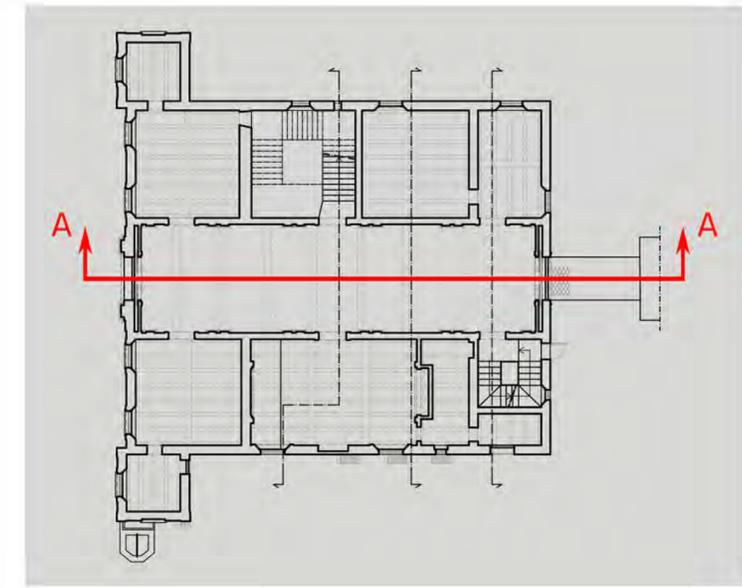
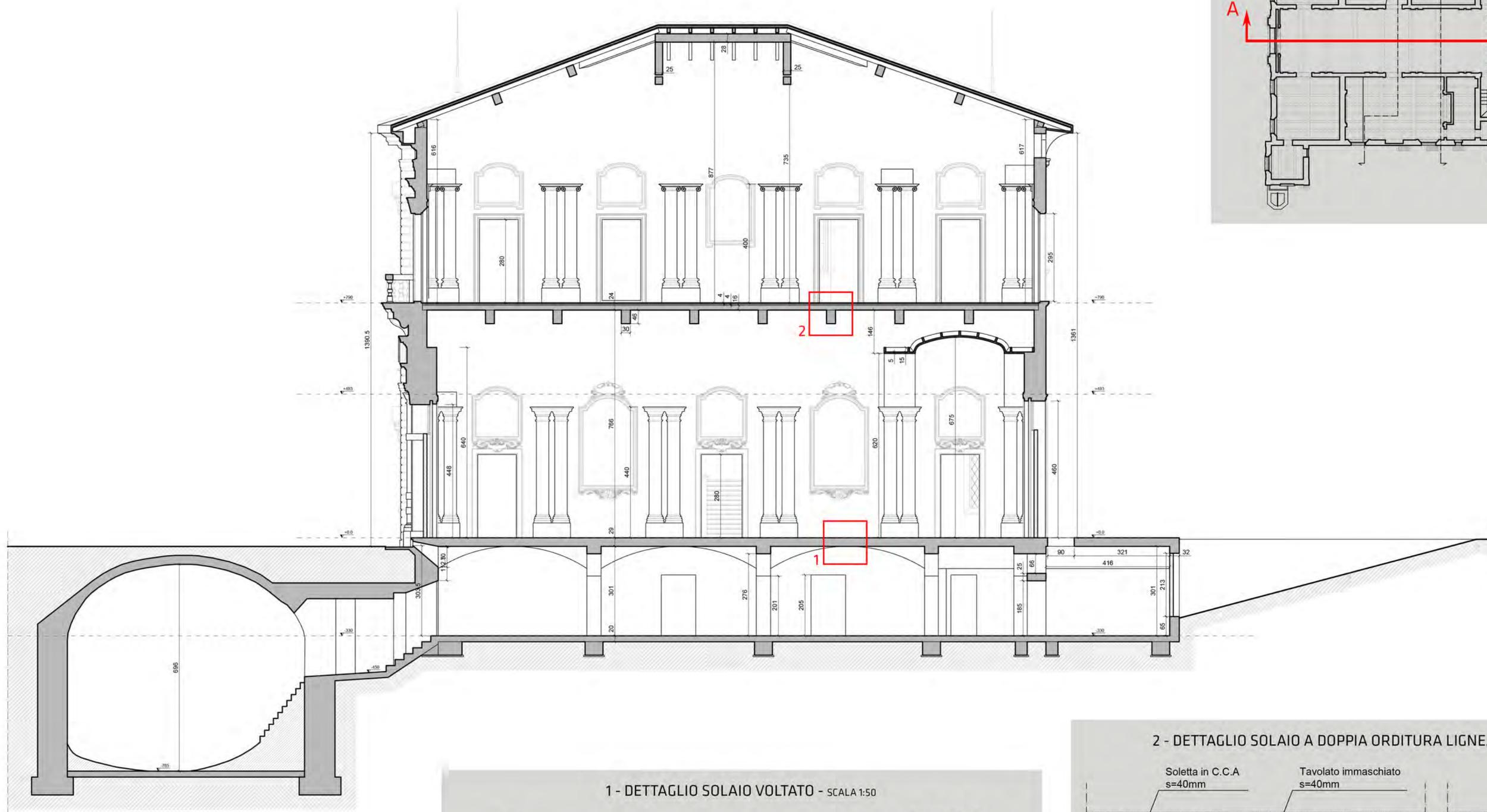




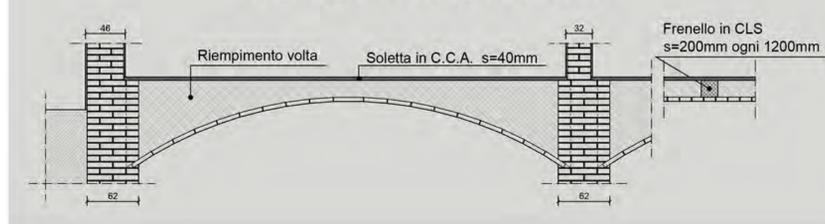


- Orditura solaio ligneo:**
- Copertura
 - Dormiente, 15x10cm
 - Dormiente, 20x15cm
 - Capriata, 15x15cm
 - Capriata, 25x25cm
 - Terzera, 25x35cm
 - Cantonale, 15x15cm
 - Cantonale, 21x21cm
 - Trave di colmo, 15x15cm
 - Trave di colmo, 21x28cm
 - Travetti secondari, 9x9cm
 - Travetti secondari, 10x15cm

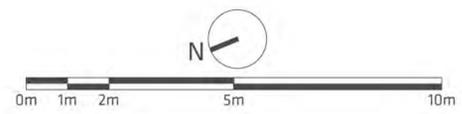
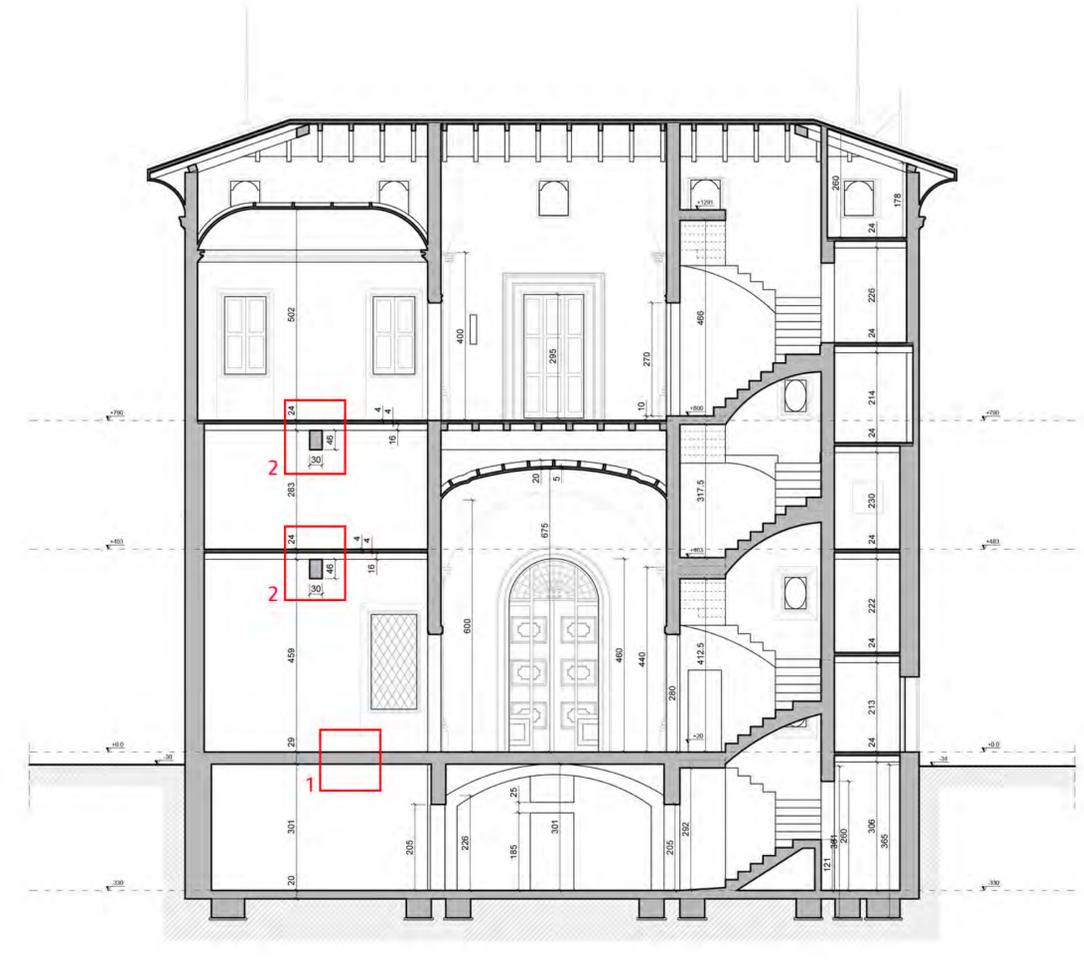
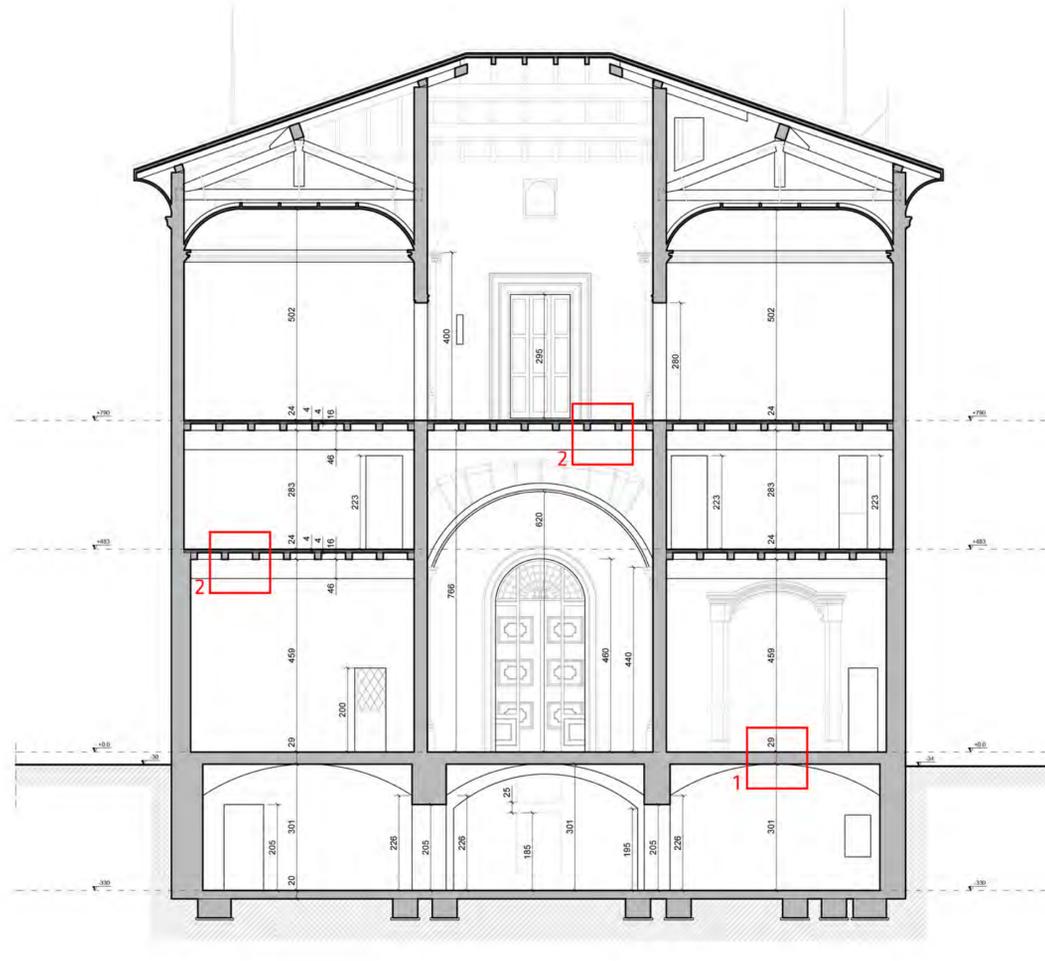
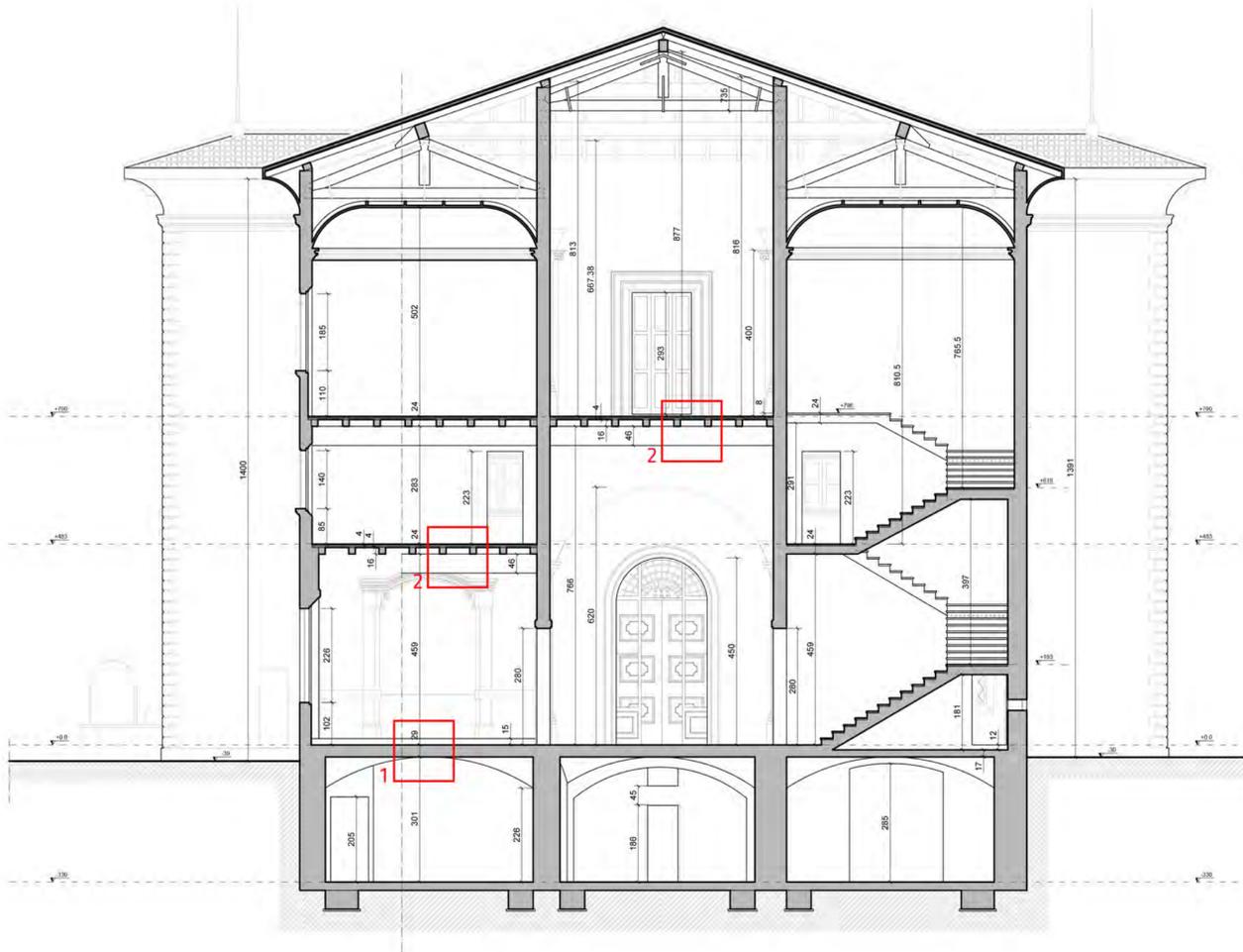
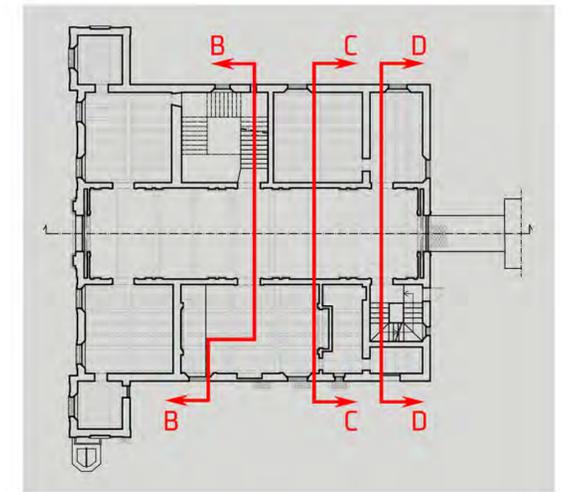
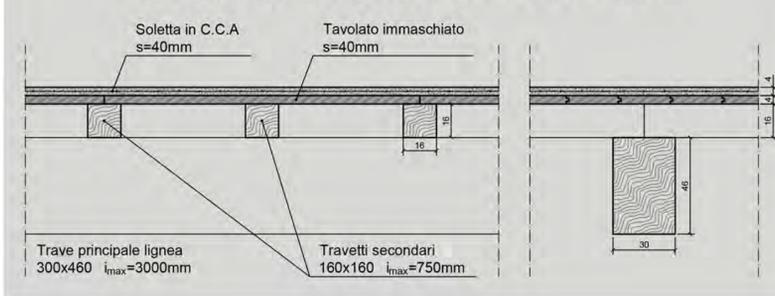


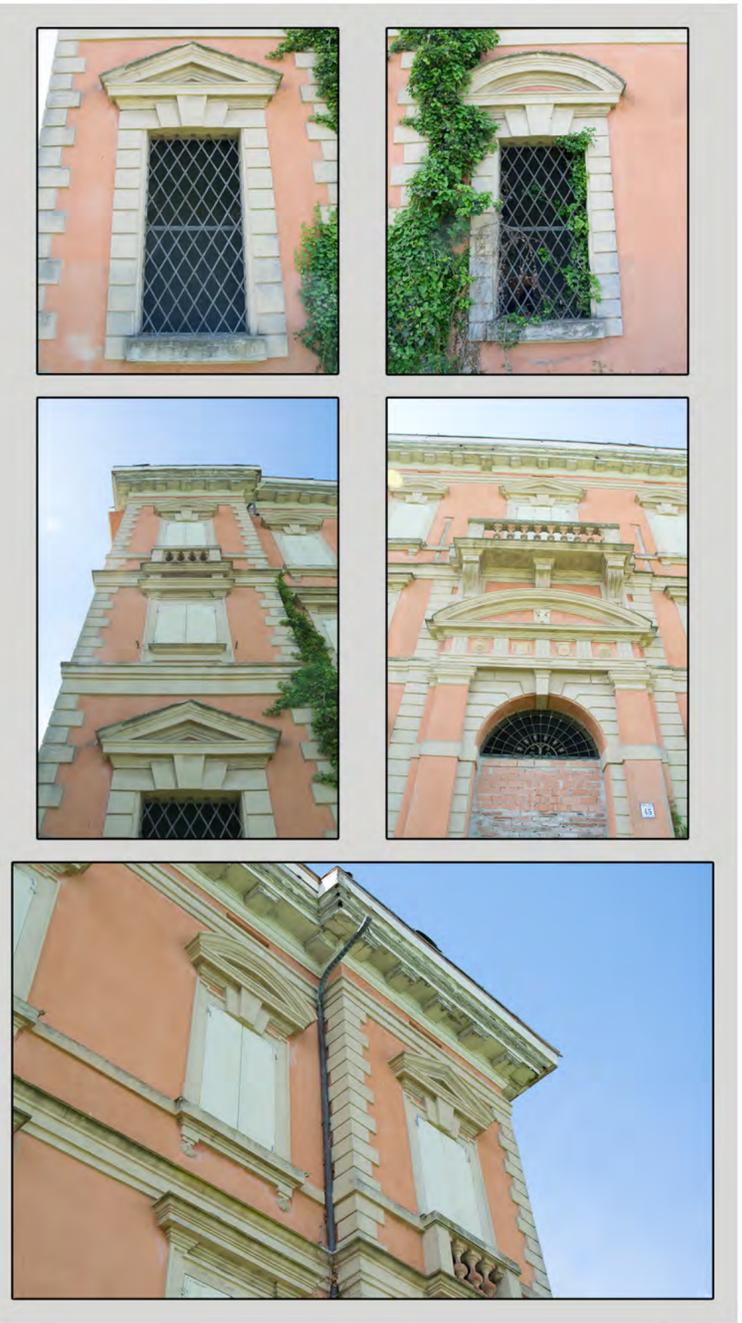
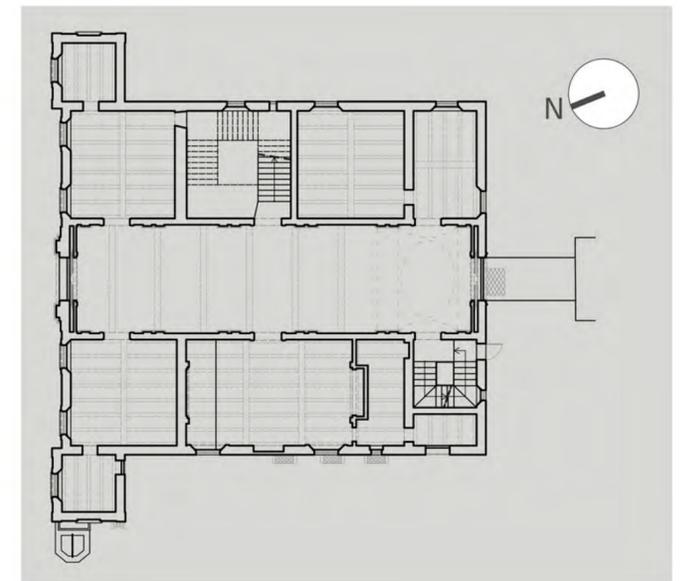


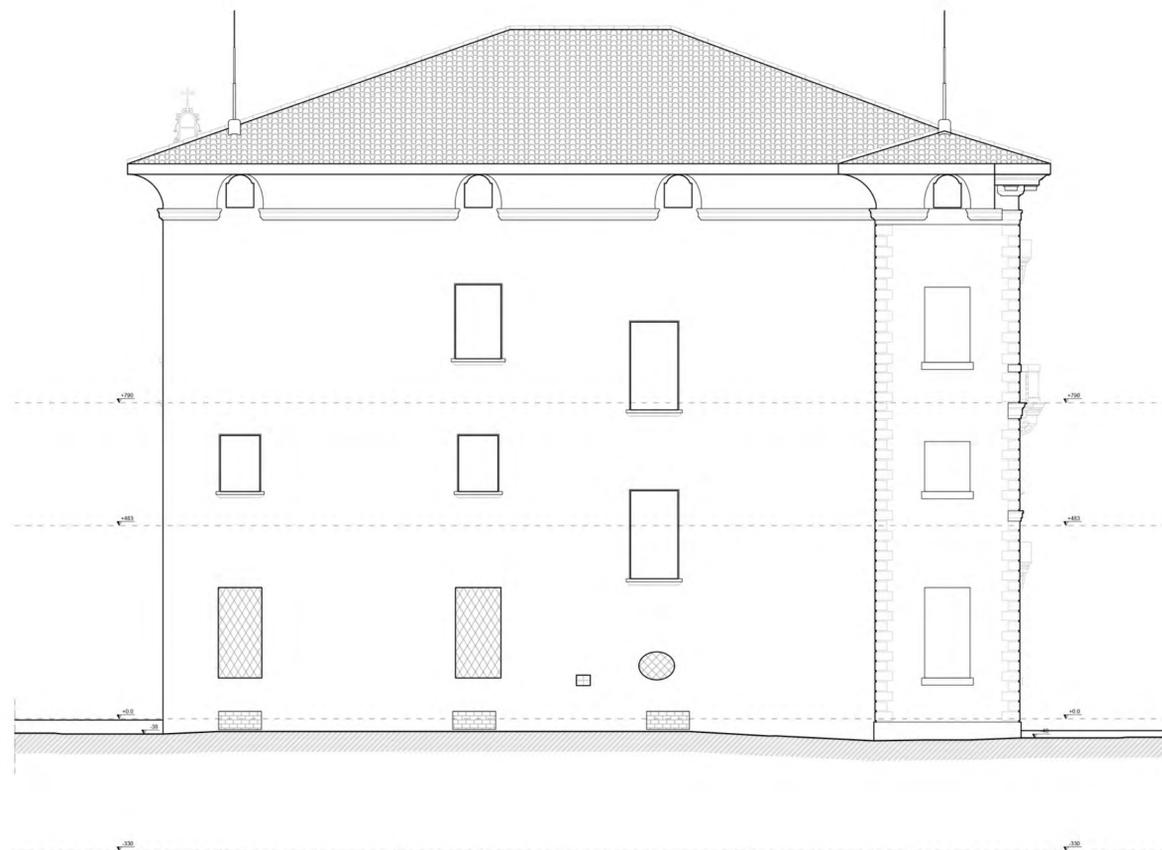
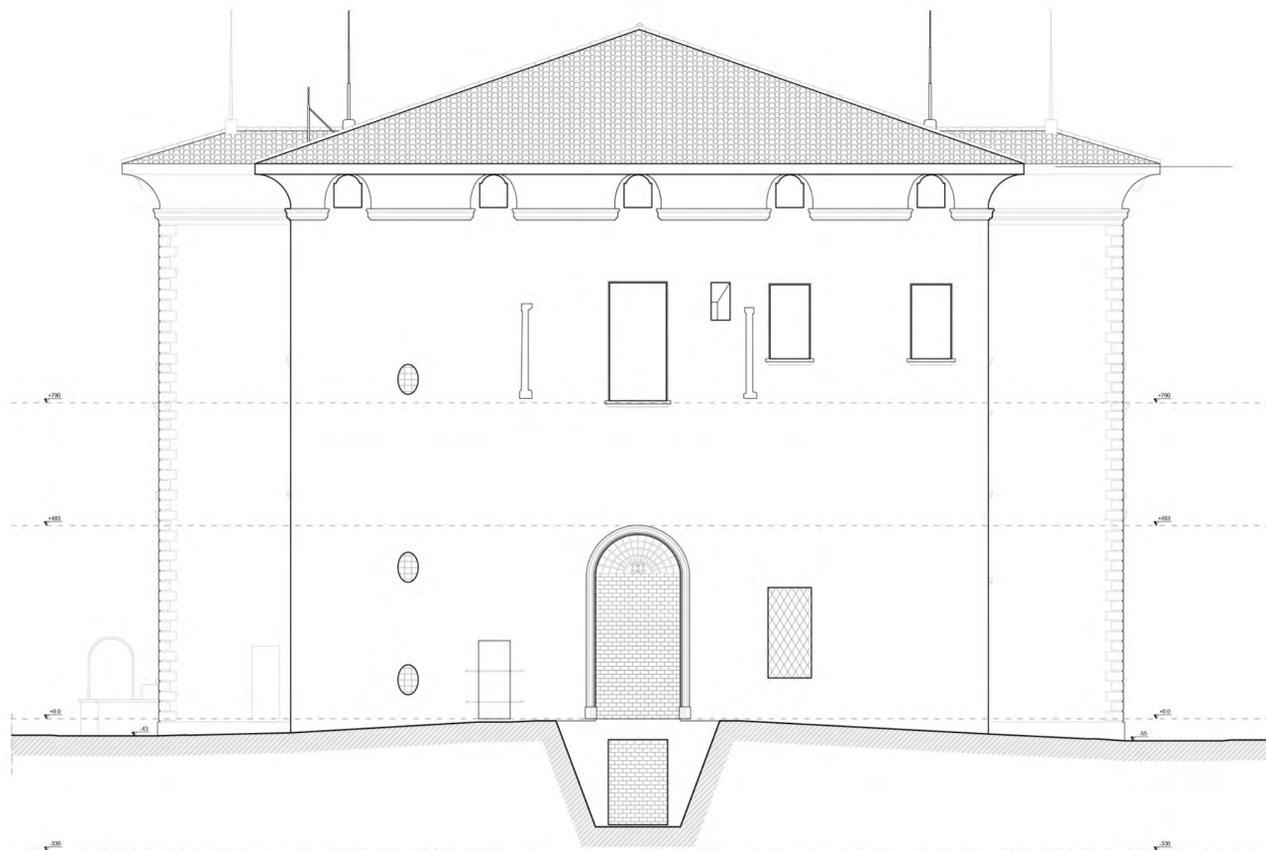
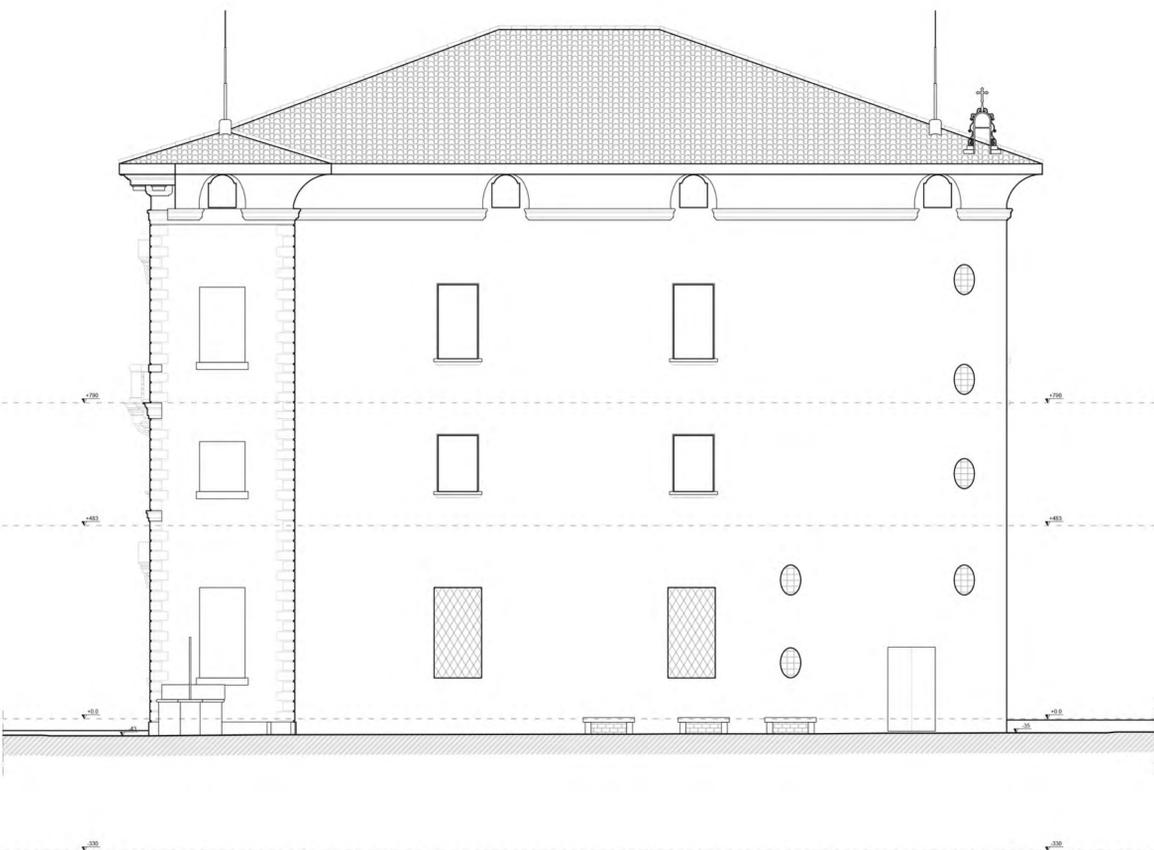
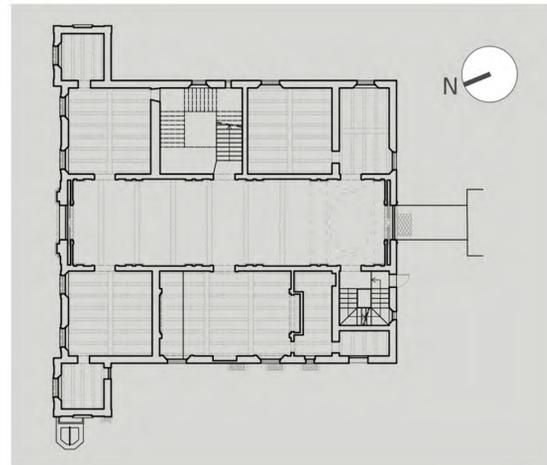
1 - DETTAGLIO SOLAIO VOLTATO - SCALA 1:50



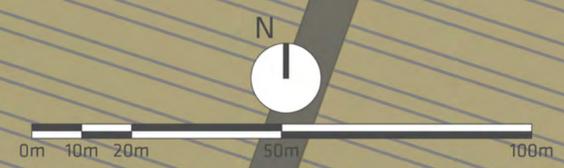
2 - DETTAGLIO SOLAIO A DOPPIA ORDITURA LIGNEA - SCALA 1:20

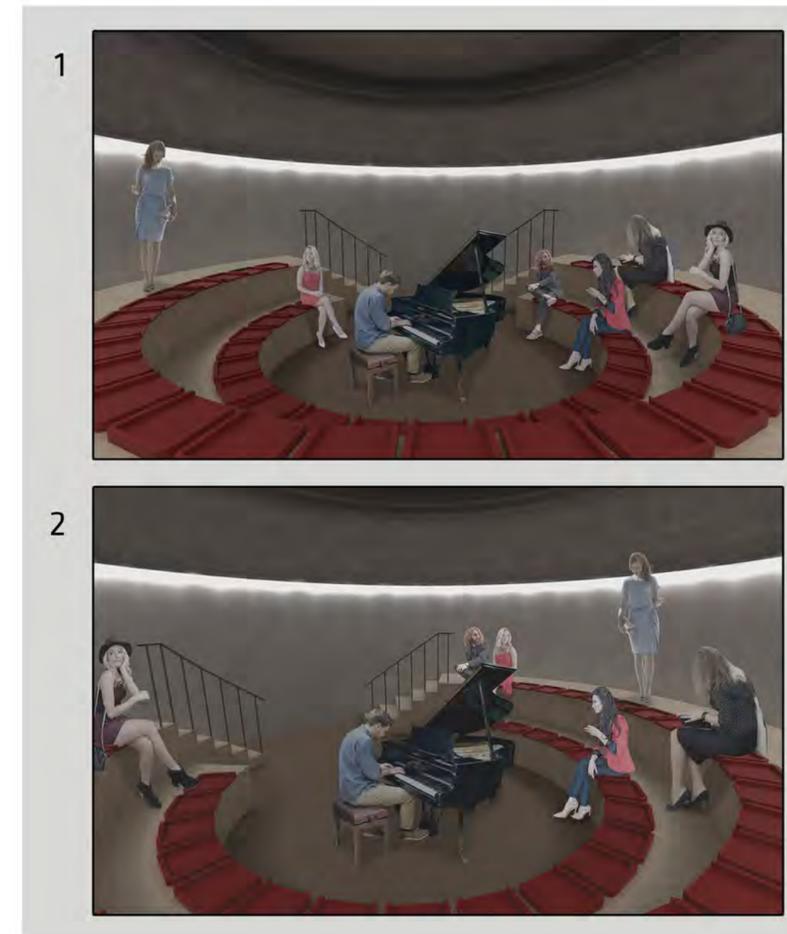
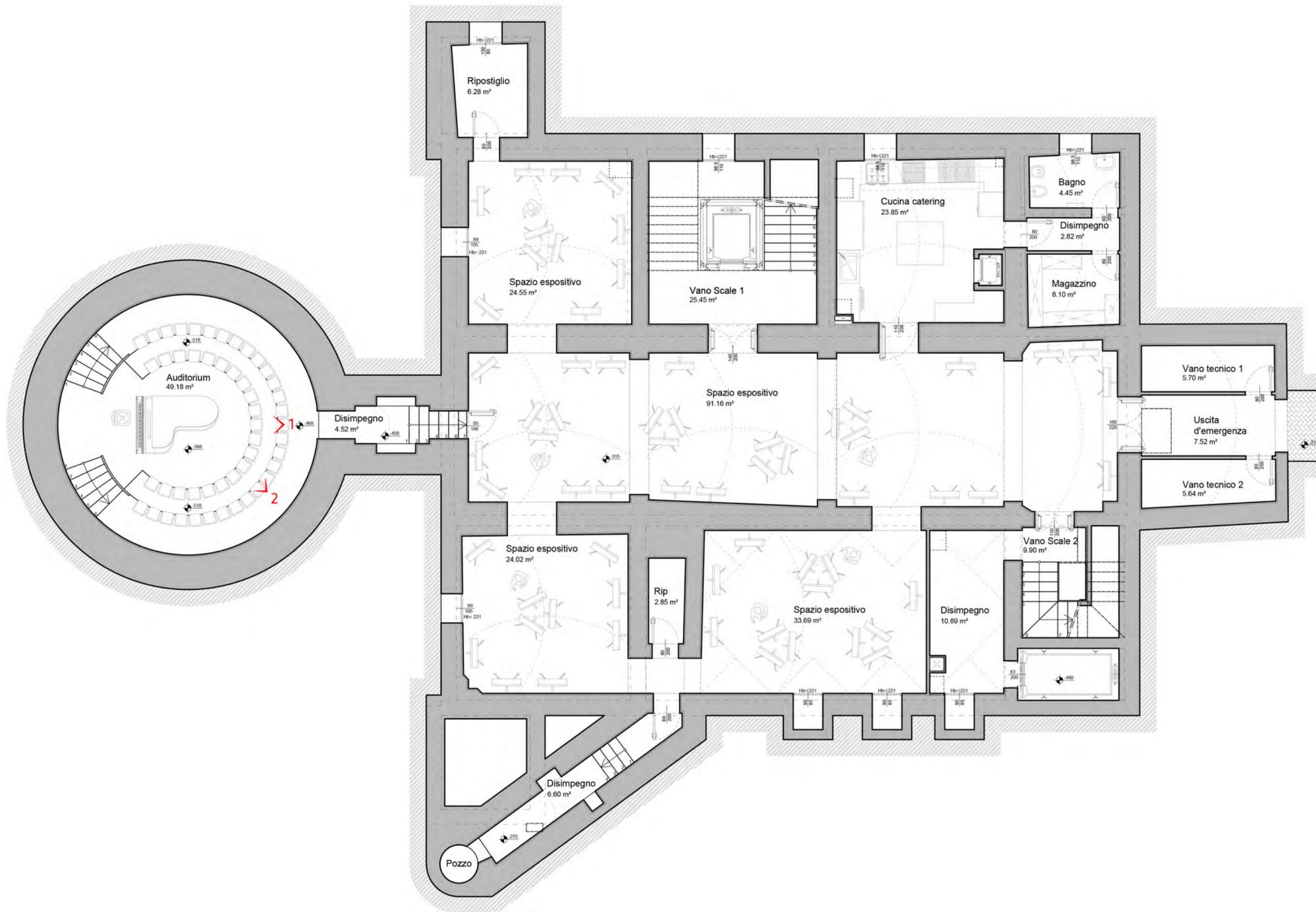






0m 1m 2m 5m 10m





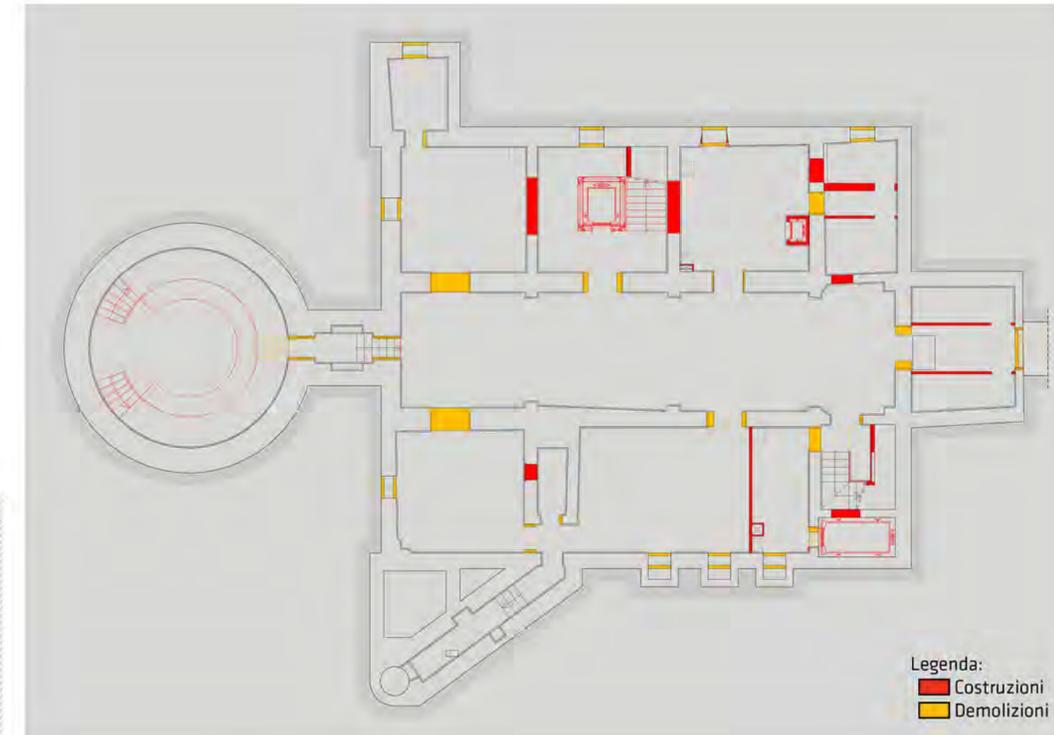
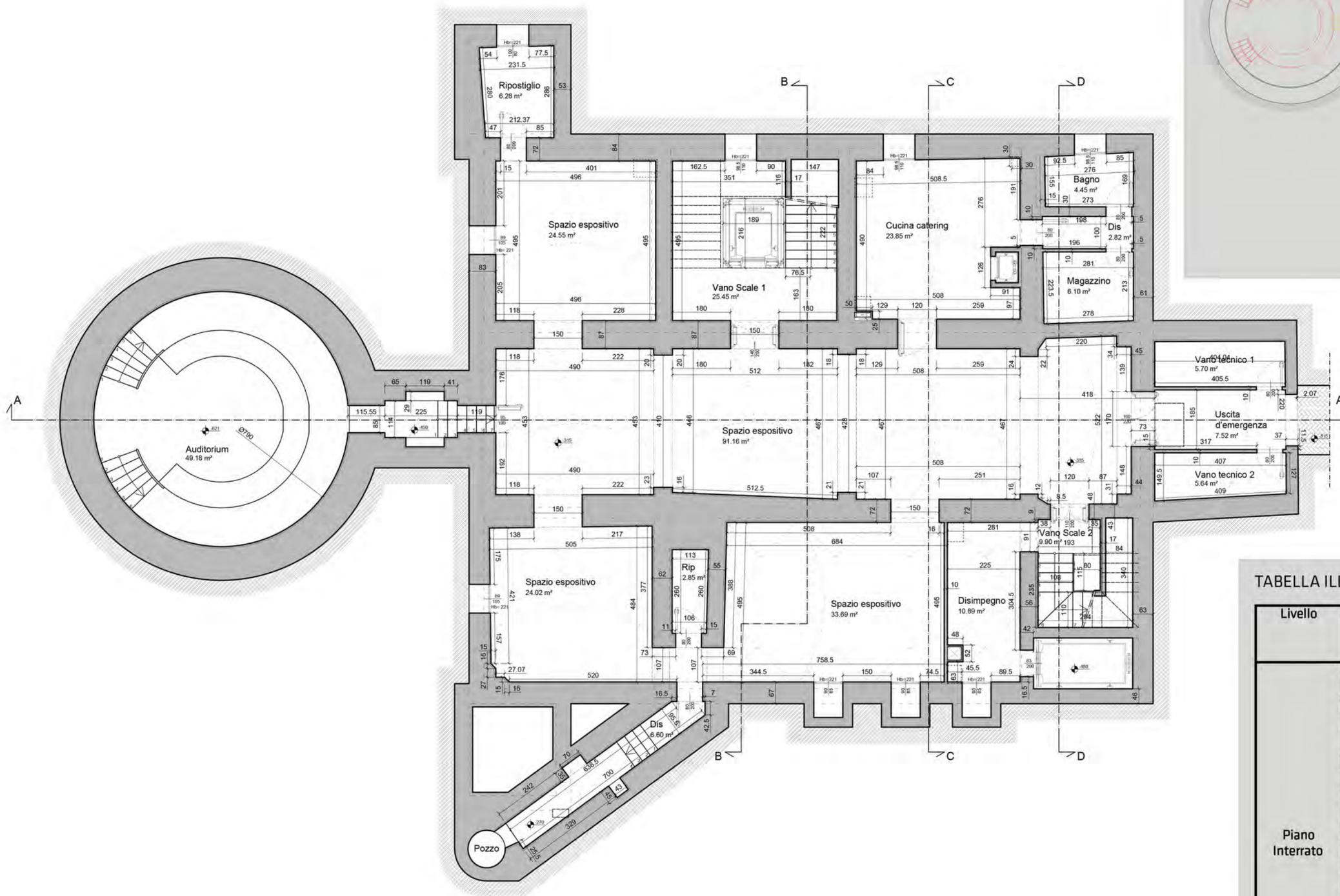
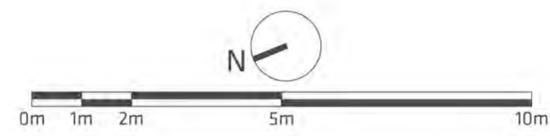
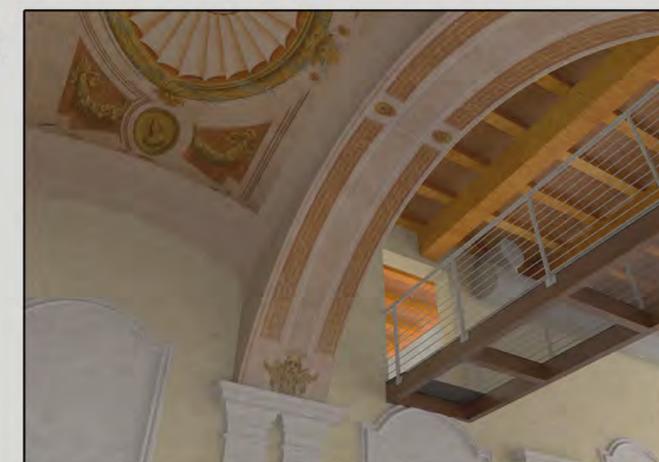
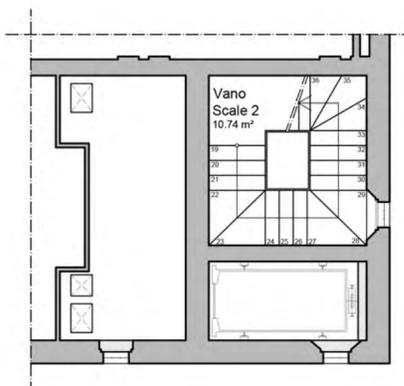


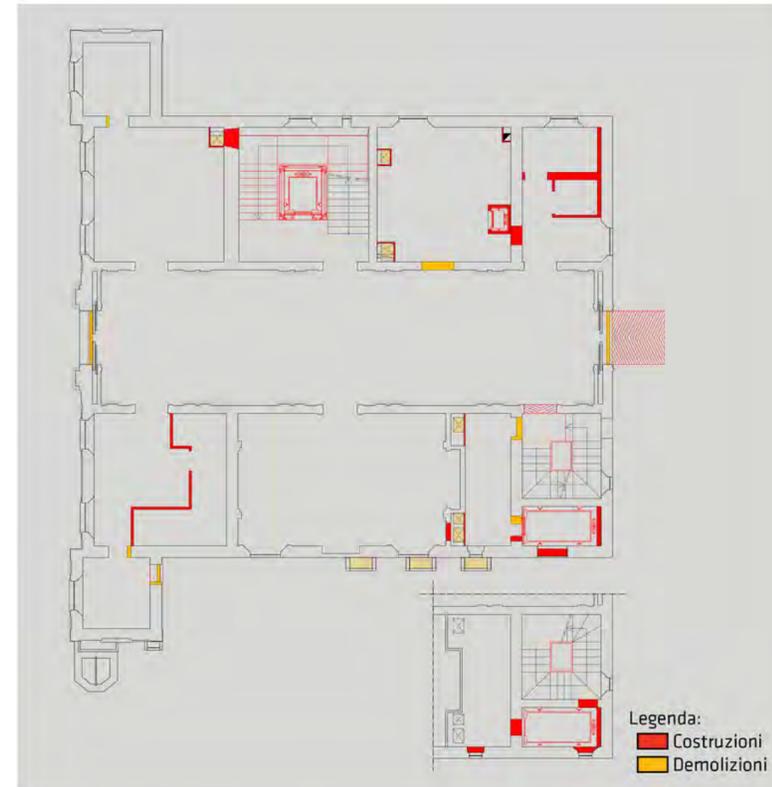
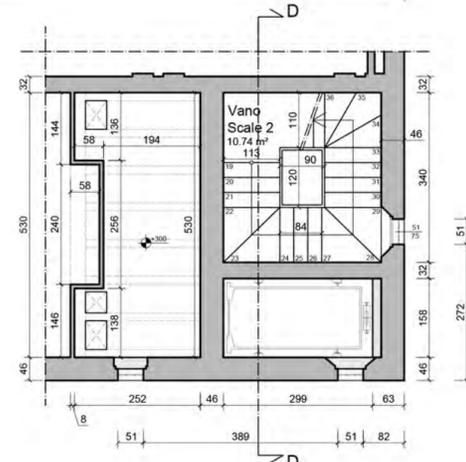
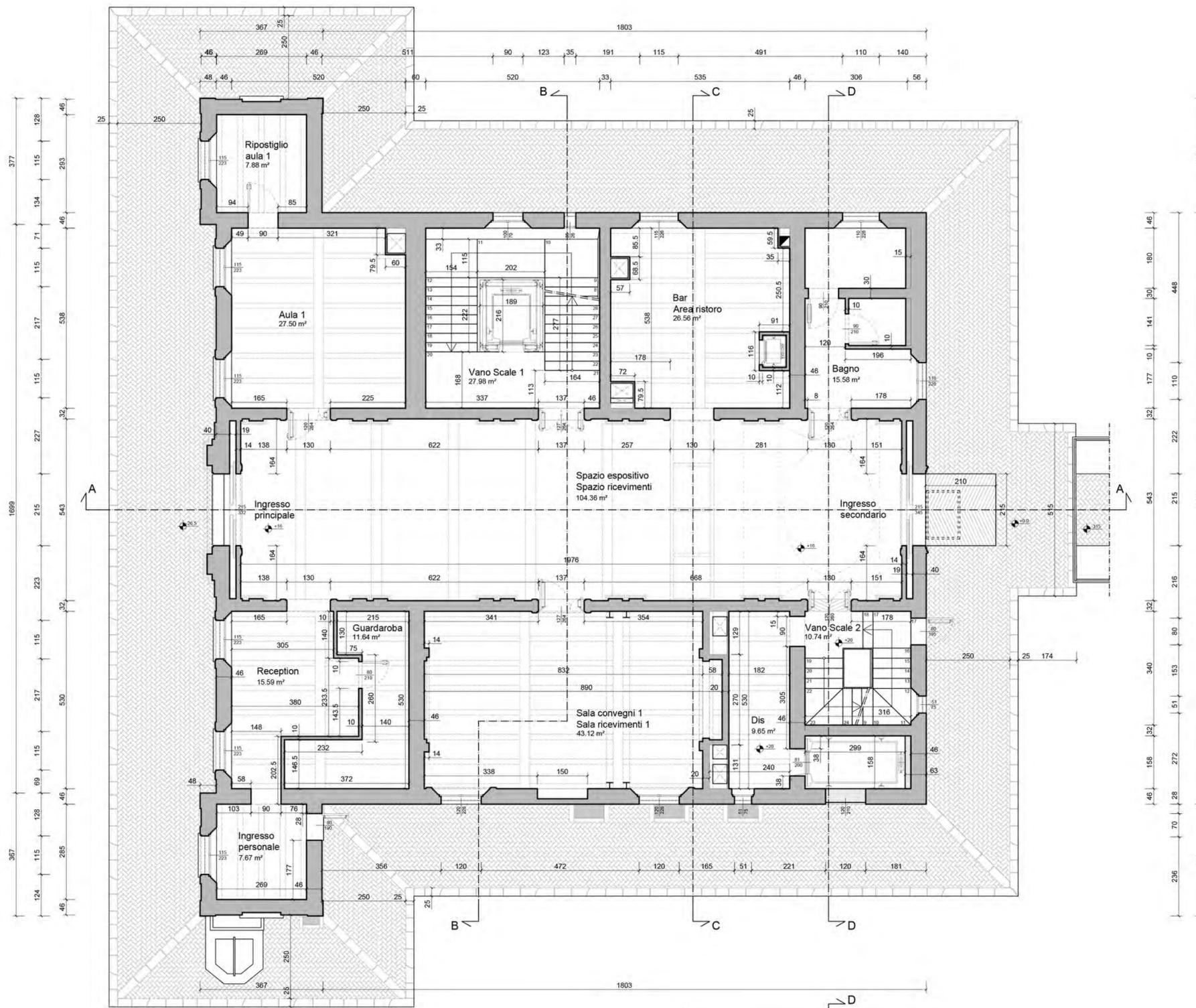
TABELLA ILLUMINO-VENTILANTE

Livello	Vano	Area (m ²)	Superficie Illuminante (m ²)	Rapporto Illuminante	Superficie Ventilante (m ²)	Rapporto Ventilante
Piano Interrato	Ripostiglio	6,28	0,80	0,127	0,80	0,127
	Spazio Espositivo	24,55	0,94	0,038	0,94	0,038
	Vano Scale 1	25,45	1,08	0,043	1,08	0,043
	Cucina Catering	23,85	1,08	0,045	1,08	0,045
	Bagno	4,45	1,08	0,244	1,08	0,244
	Disimpegno	2,82	*	*	*	*
	Magazzino	6,10	*	*	*	*
	Auditorium	44,42	*	*	*	*
	Disimpegno	4,56	*	*	*	*
	Spazio Espositivo	91,16	*	*	*	*
	Vano Tecnico 1	5,70	*	*	*	*
	Uscita d'Emergenza	7,52	*	*	*	*
	Vano Tecnico 2	5,64	*	*	*	*
	Spazio Espositivo	24,02	0,94	0,039	0,94	0,039
	Ripostiglio	2,85	*	*	*	*
	Spazio Espositivo	33,69	1,53	0,045	1,53	0,045
	Disimpegno	10,89	0,77	0,070	0,77	0,070
Vano Scale 2	9,90	*	*	*	*	
Disimpegno	6,60	*	*	*	*	
Superficie Totale	340,45					

Ogni ambiente è stato dotato di illuminazione artificiale e ventilazione meccanica controllata







DETTAGLIO SOLAIO A DOPPIA ORDITURA LIGNEA - SCALA 1:20

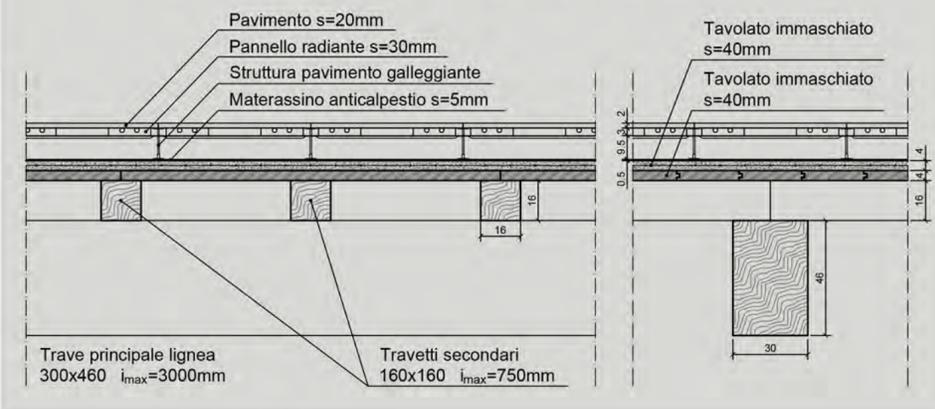
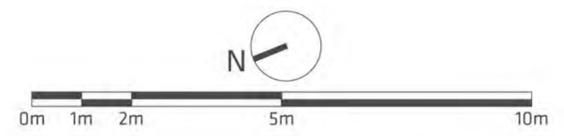
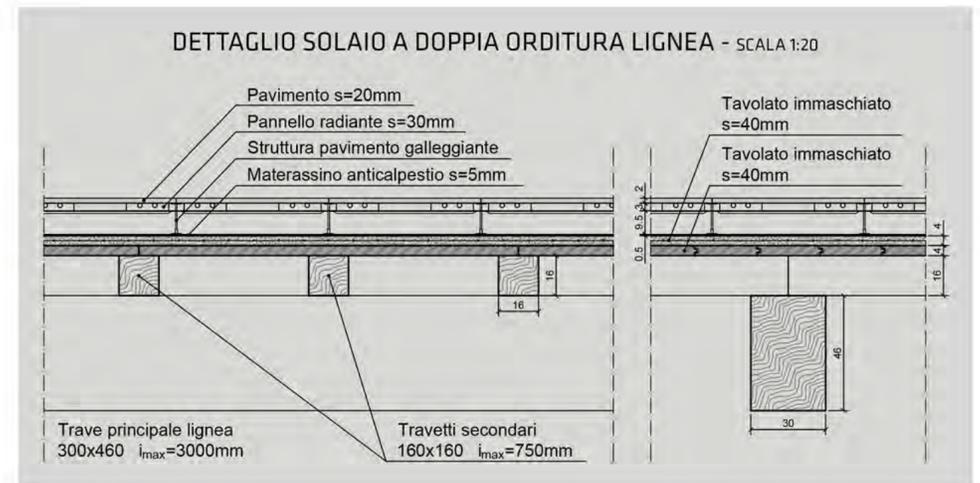
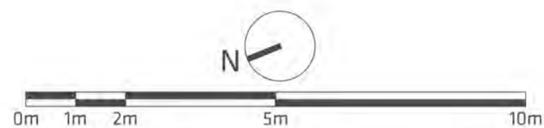
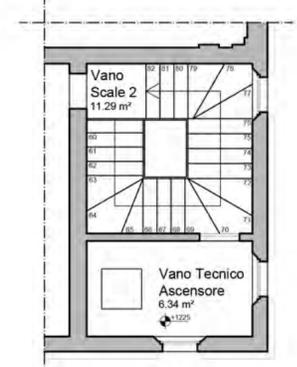
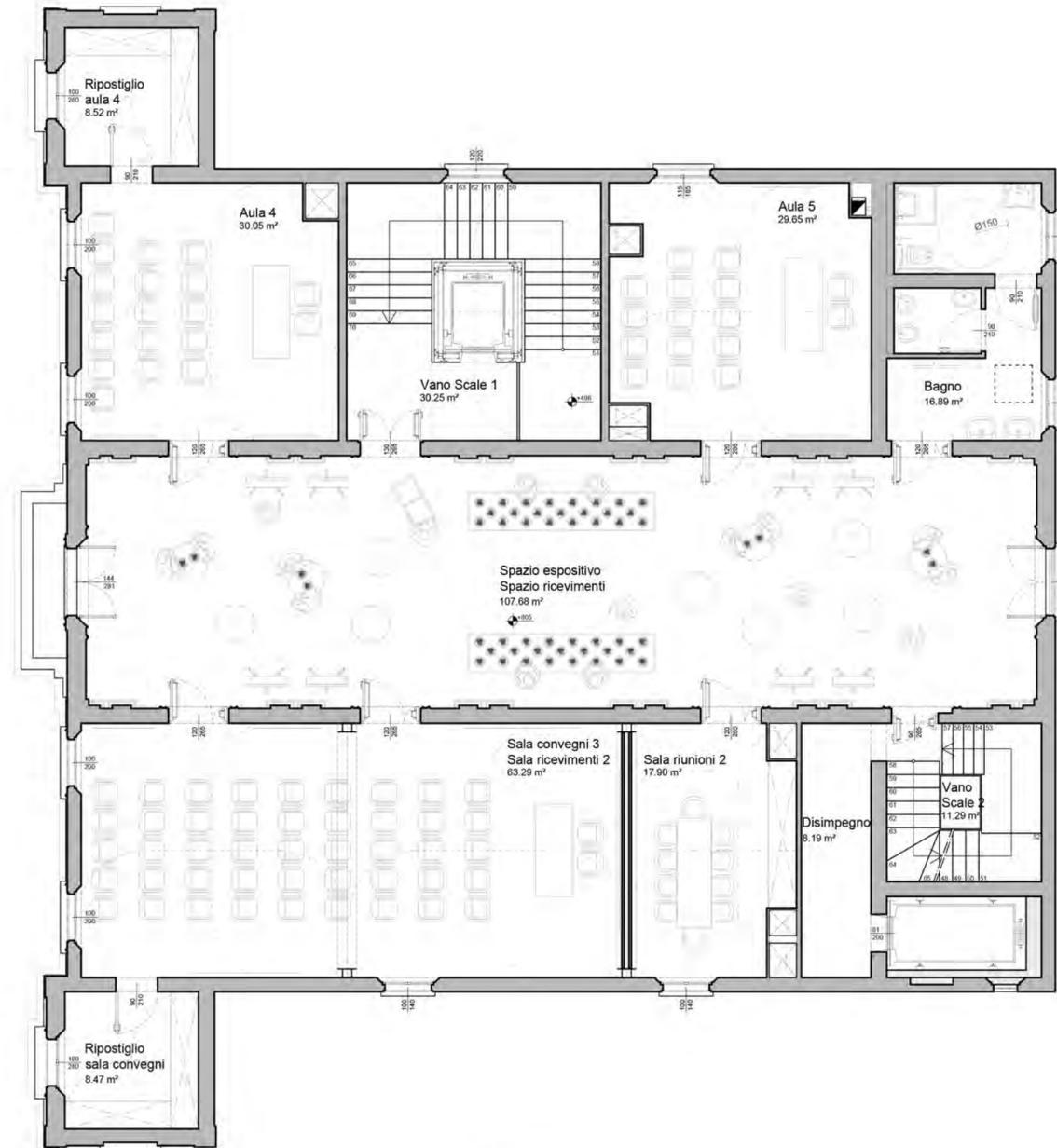
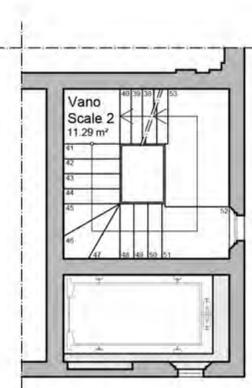
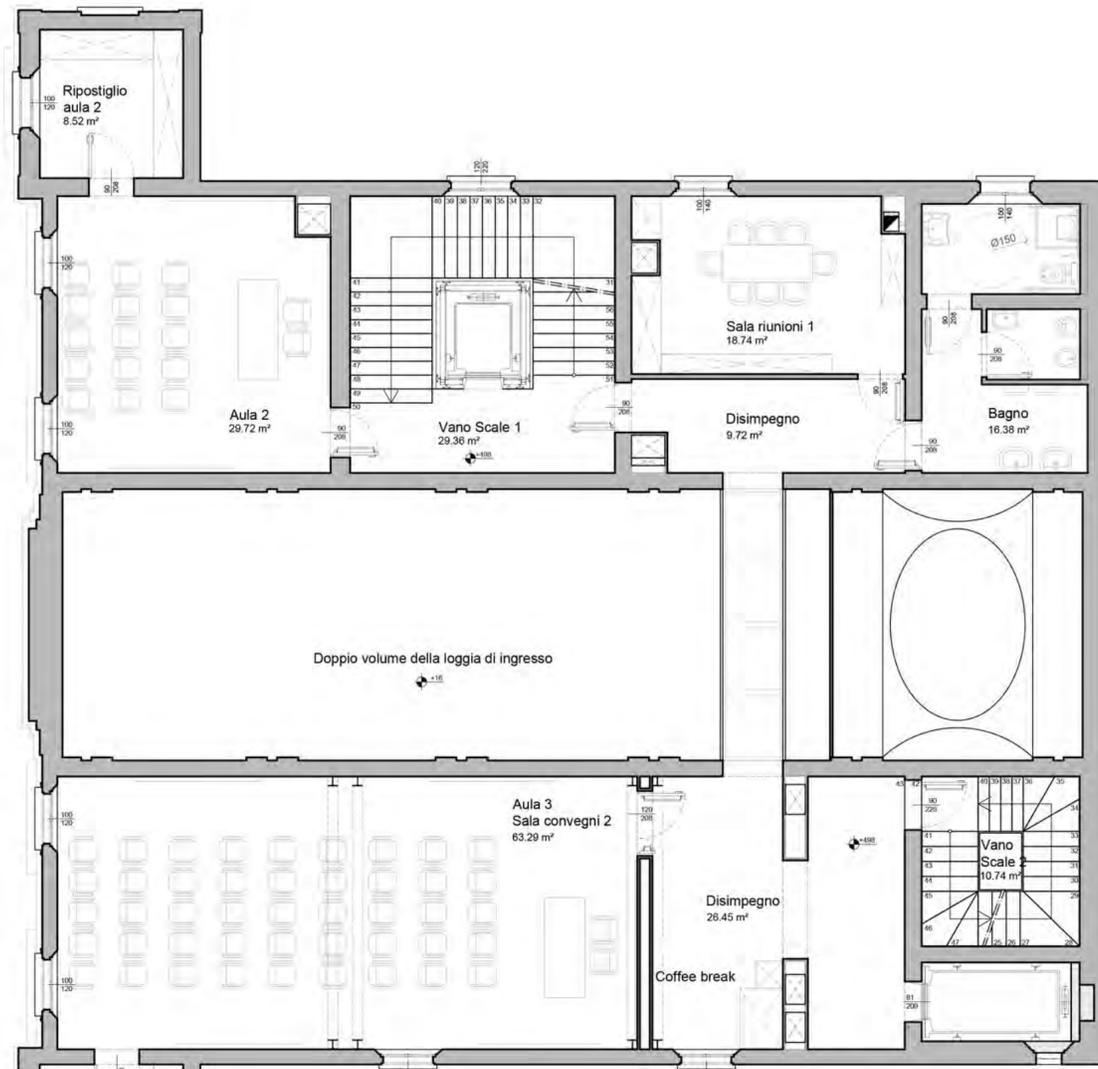


TABELLA ILLUMINO-VENTILANTE

Livello	Vano	Area (m ²)	Superficie Illuminante (m ²)	Rapporto Illuminante	Superficie Ventilante (m ²)	Rapporto Ventilante
Piano Terra	Ripostiglio Aula 1	7,88	2,56	0,325	2,56	0,325
	Aula 1	27,50	5,13	0,187	5,13	0,187
	Vano Scale 1	27,98	0,59	0,021	0,49	0,018
	Bar	26,56	2,60	0,098	2,60	0,098
	Bagno	15,58	4,97	0,319	4,97	0,319
	Spazio Espositivo Spazio Ricevimenti	104,36	*	*	*	*
	Reception	15,59	5,13	0,329	5,13	0,329
	Guardaroba	11,64	*	*	*	*
	Sala Convegni 1 Sala Ricevimenti 1	43,12	5,42	0,126	5,42	0,126
	Disimpegno	9,65	*	*	*	*
	Vano Scale 2	10,74	*	*	*	*
	Ingresso personale	7,67	2,56	0,334	2,56	0,334
	Superficie Totale	308,27				

Ogni ambiente è stato dotato di illuminazione artificiale e ventilazione meccanica controllata





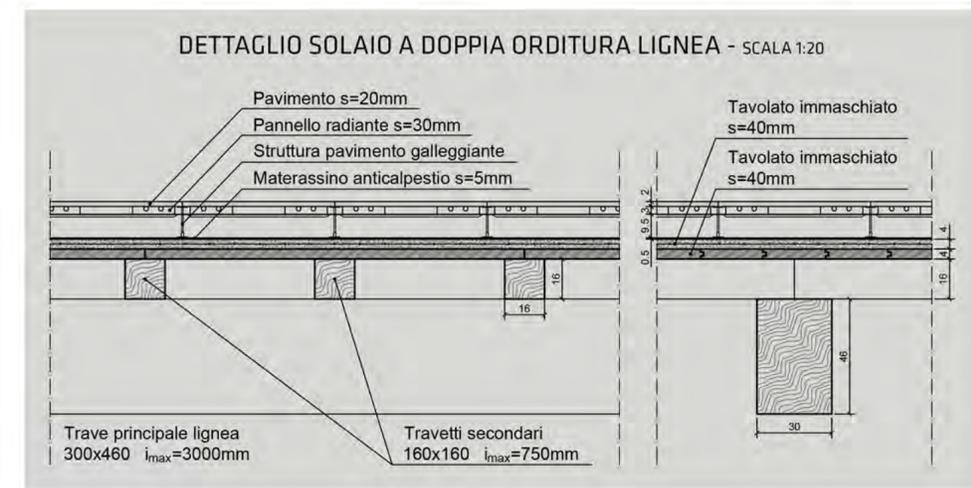
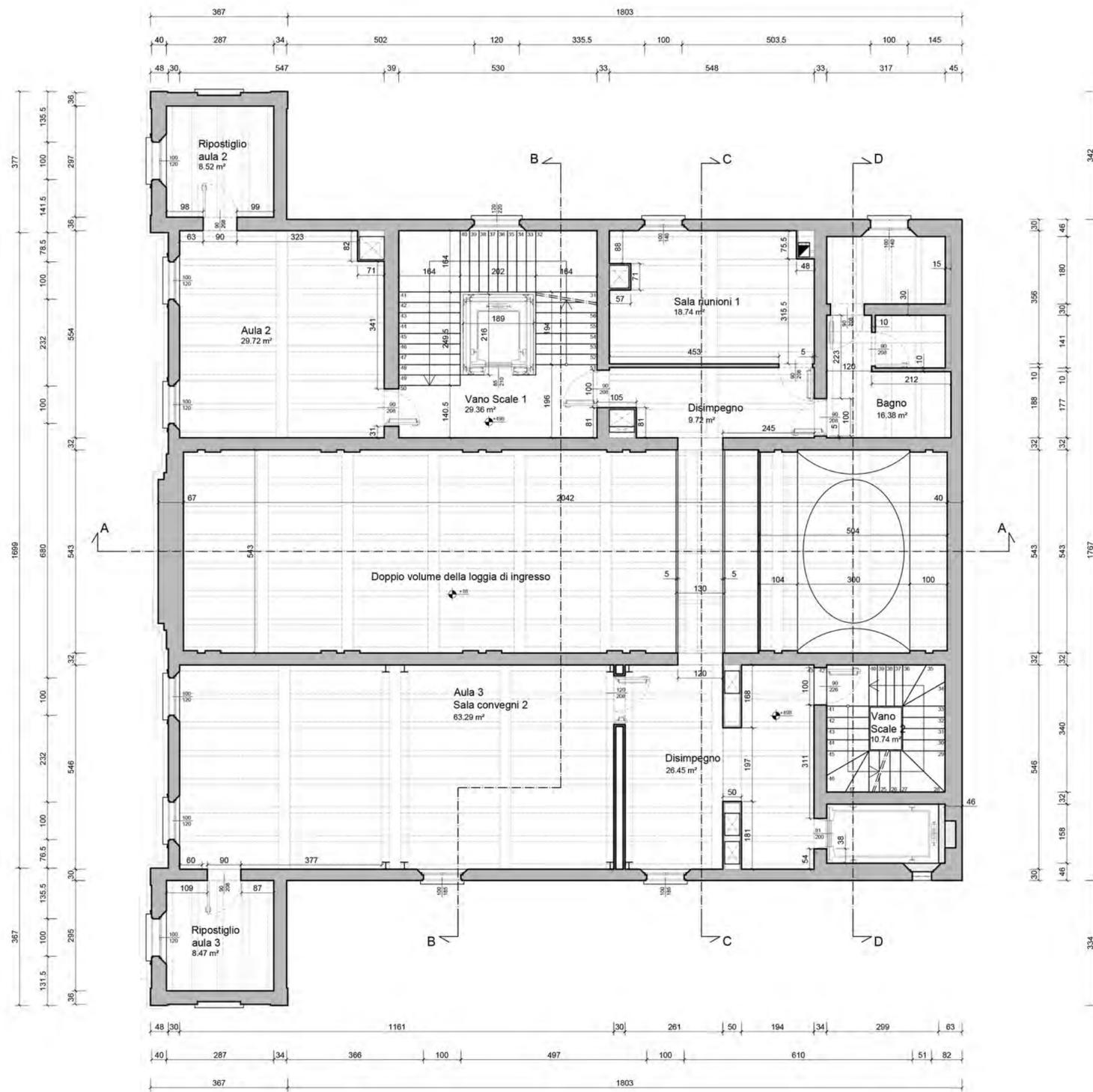


TABELLA ILLUMINO-VENTILANTE

Livello	Vano	Area (m ²)	Superficie Illuminante (m ²)	Rapporto Illuminante	Superficie Ventilante (m ²)	Rapporto Ventilante
Piano Ammezzato	Ripostiglio Aula 2	8,52	1,20	0,141	1,20	0,141
	Aula 2	29,72	2,40	0,081	2,40	0,081
	Vano Scale 1	29,36	2,64	0,090	2,64	0,090
	Sala Riunioni 1	18,74	1,40	0,075	14,00	0,747
	Disimpegno	9,72	*	*	*	*
	Bagno	16,38	1,40	0,085	1,40	0,085
	Aula 3	63,05	4,25	0,067	4,25	0,067
	Sala Convegni 2	63,05	4,25	0,067	4,25	0,067
	Disimpegno	25,75	1,85	0,072	1,85	0,072
	Vano Scale 2	10,74	*	*	*	*
Ripostiglio Aula 3	8,47	1,20	0,142	1,20	0,142	
Superficie Totale		220,45				

Ogni ambiente è stato dotato di illuminazione artificiale e ventilazione meccanica controllata

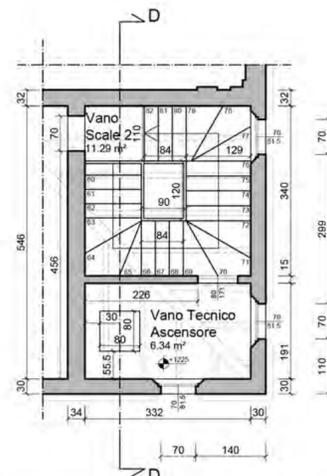
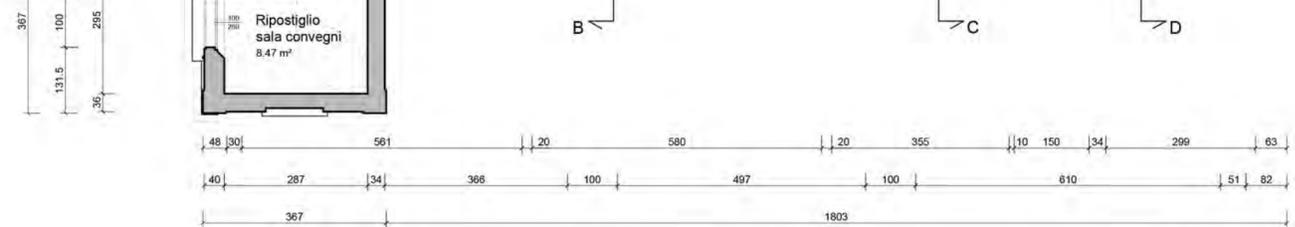
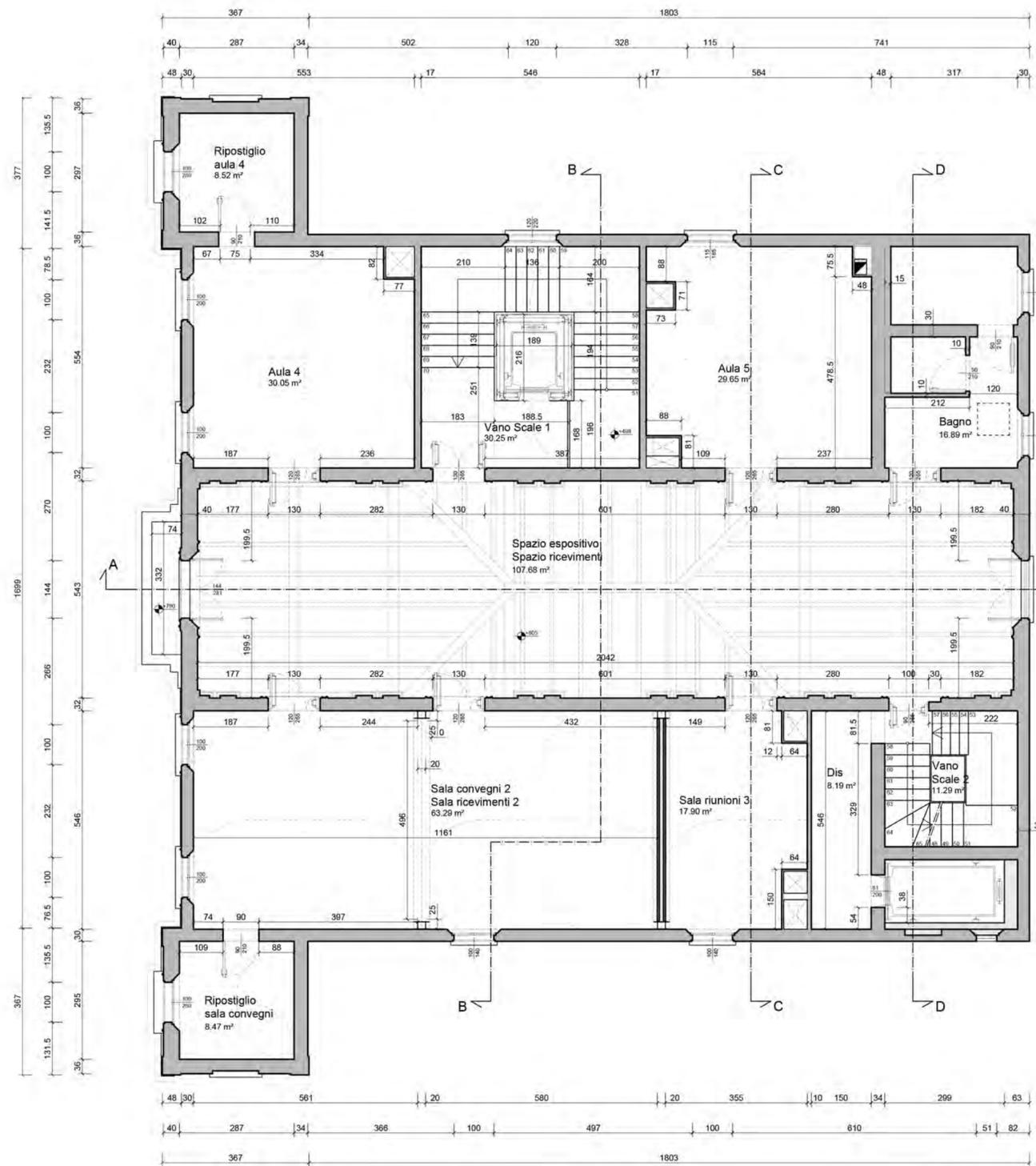
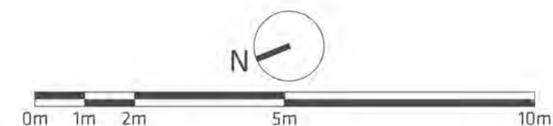
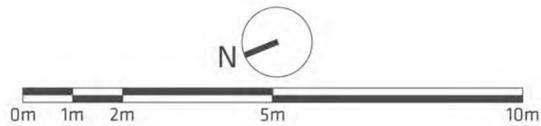
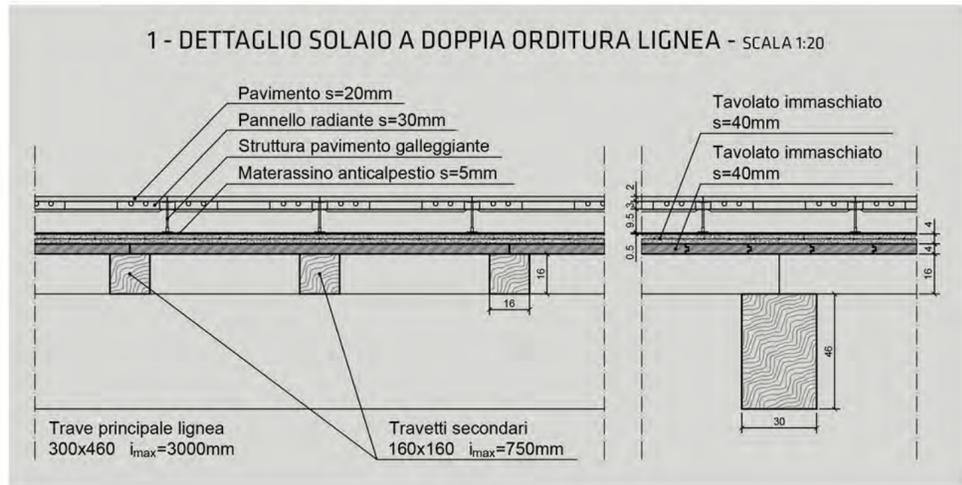
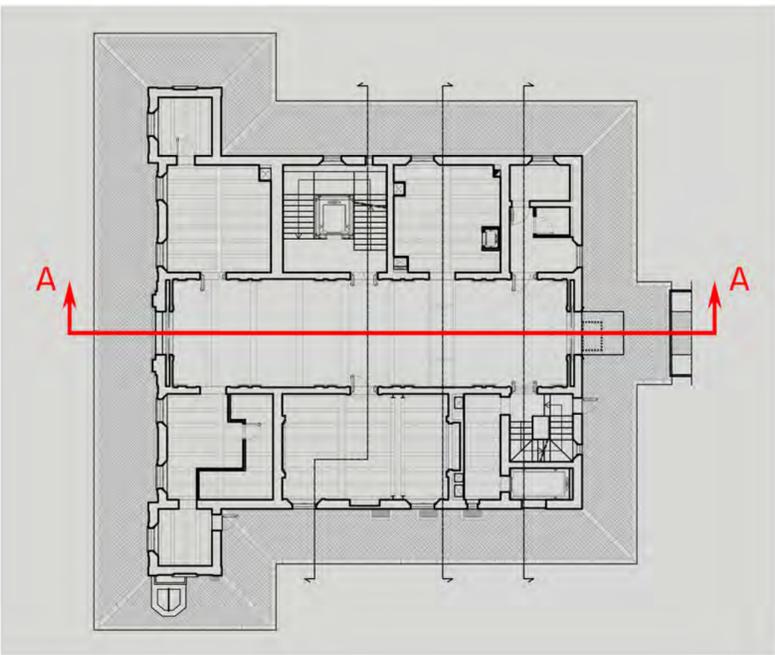
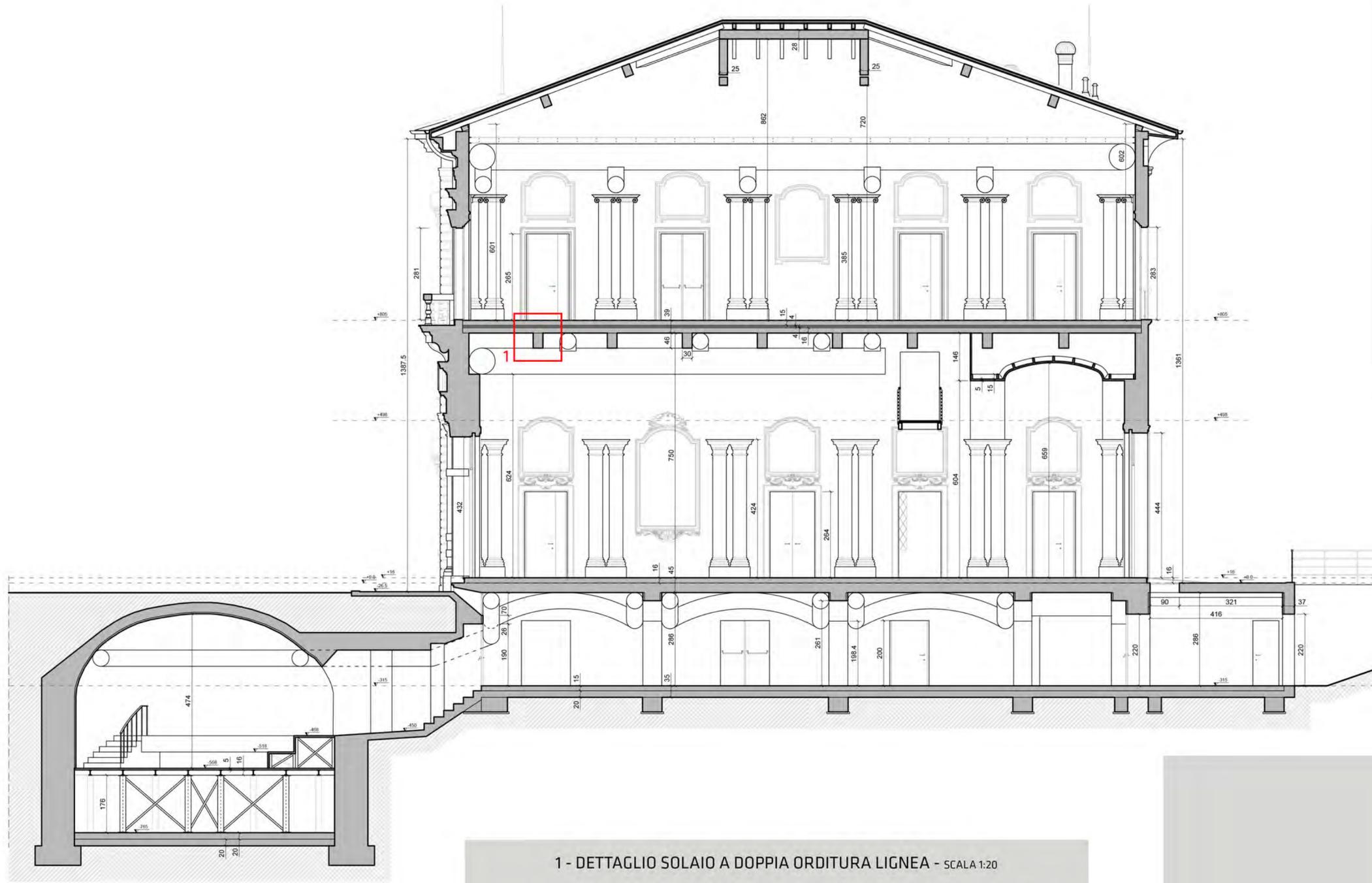


TABELLA ILLUMINO-VENTILANTE

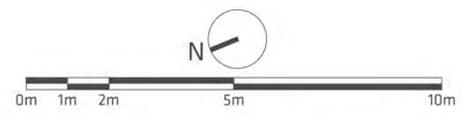
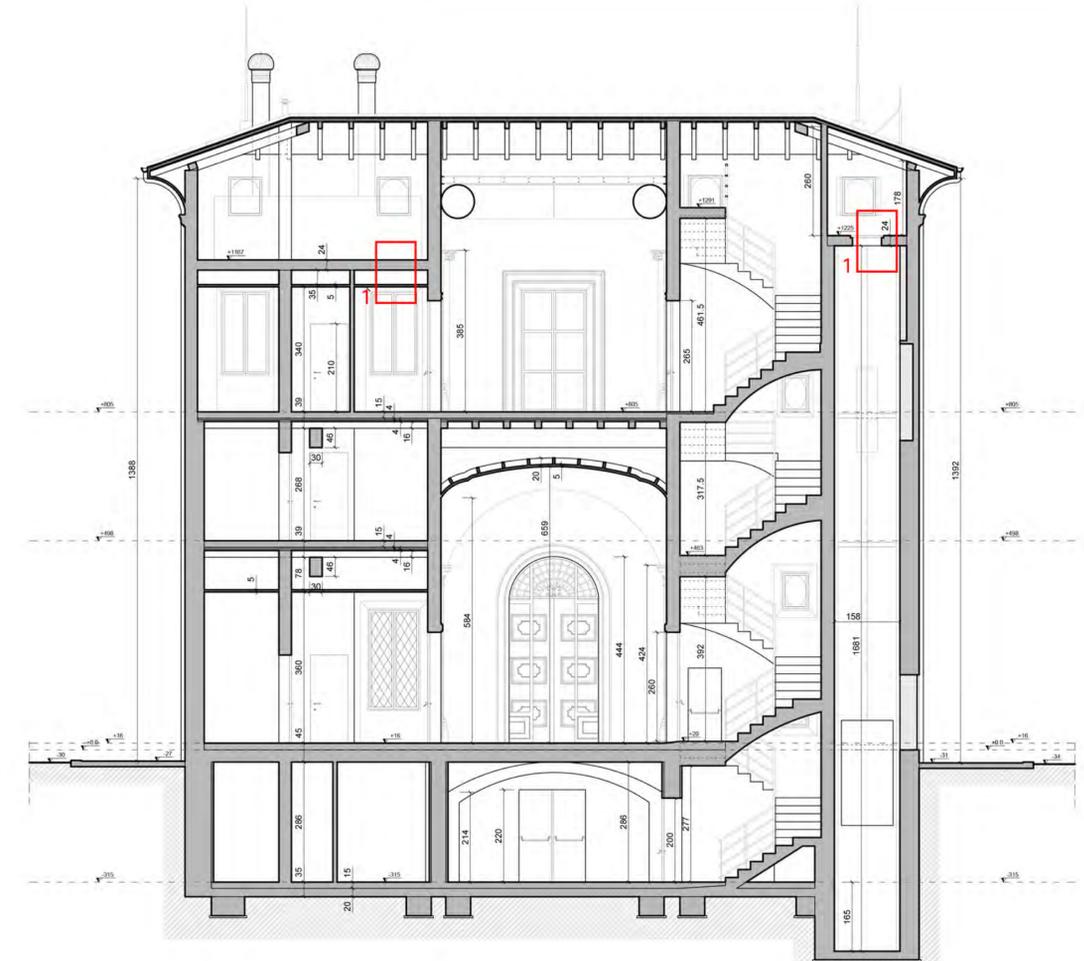
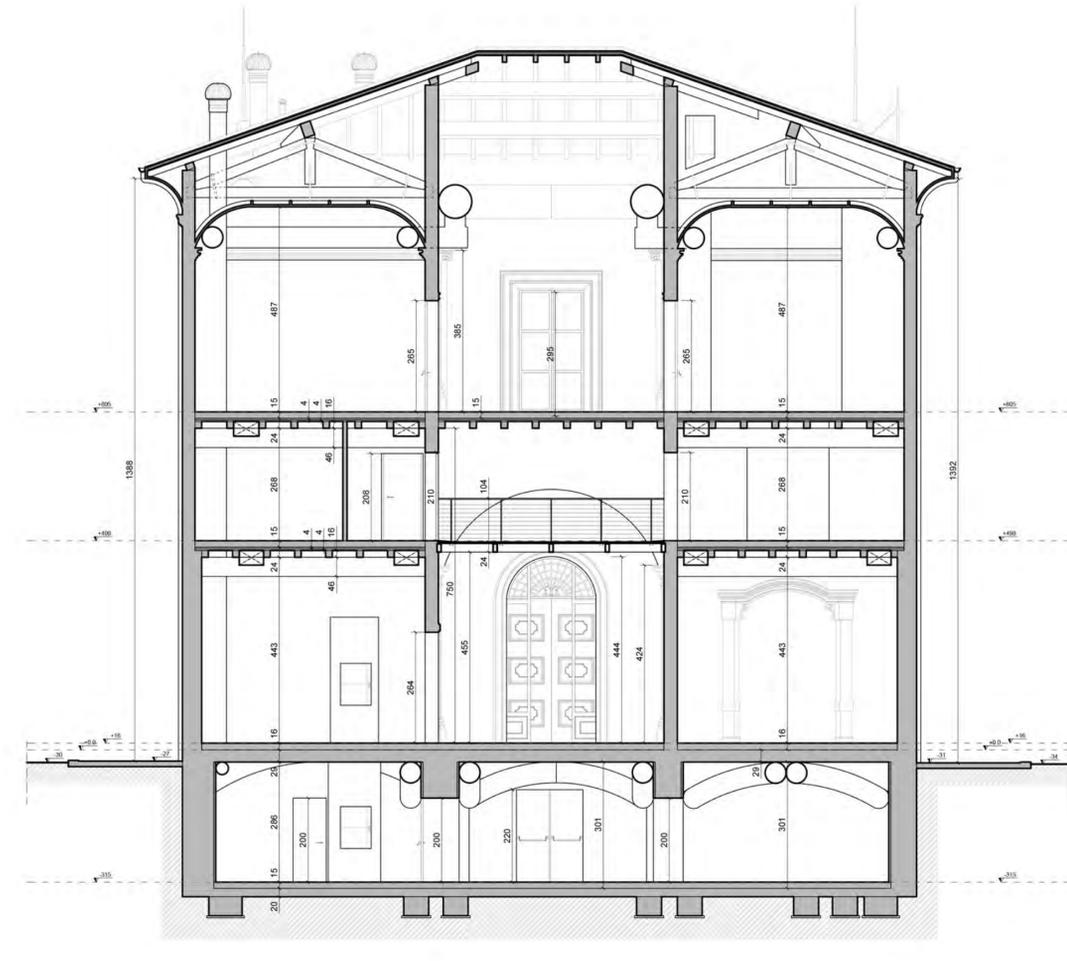
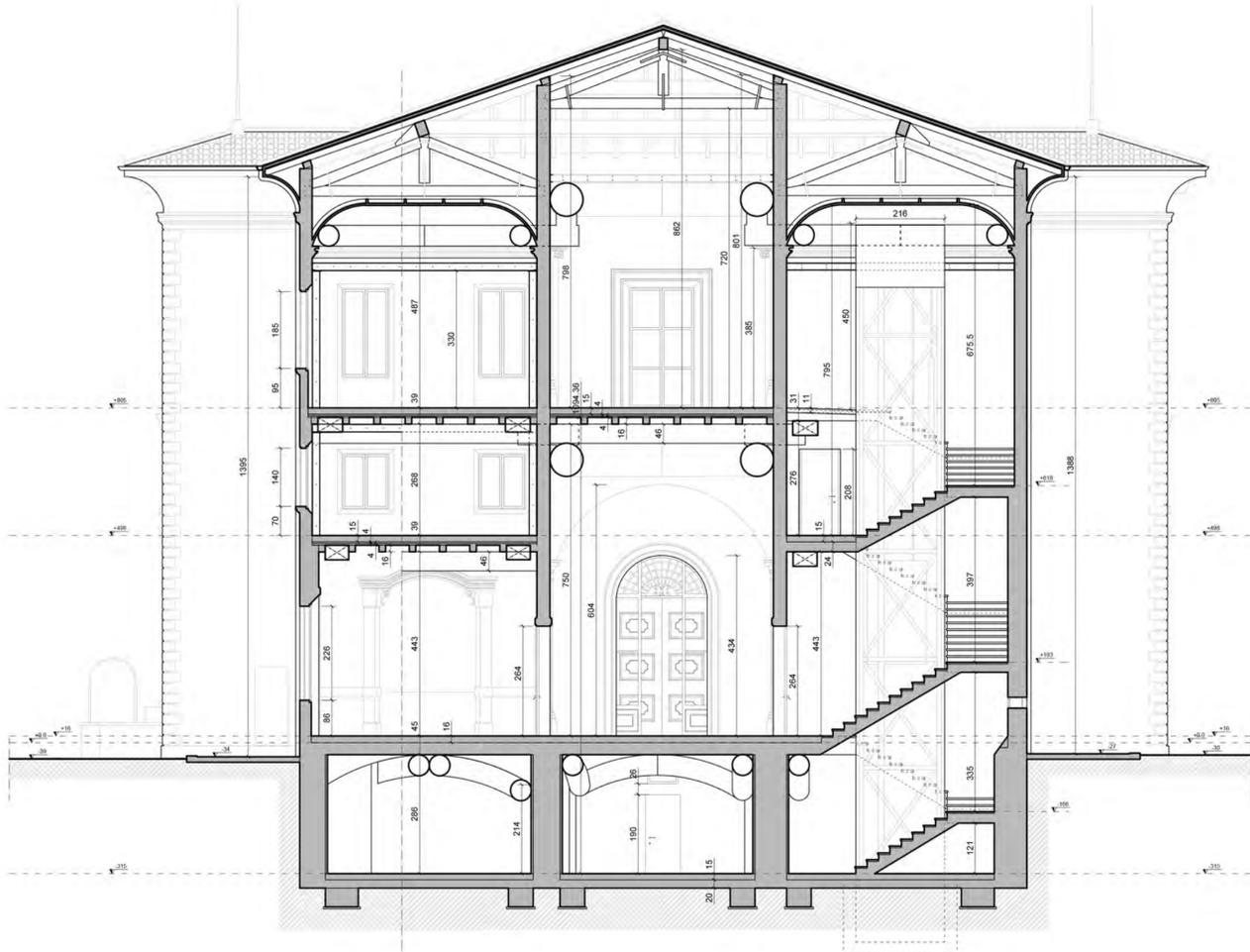
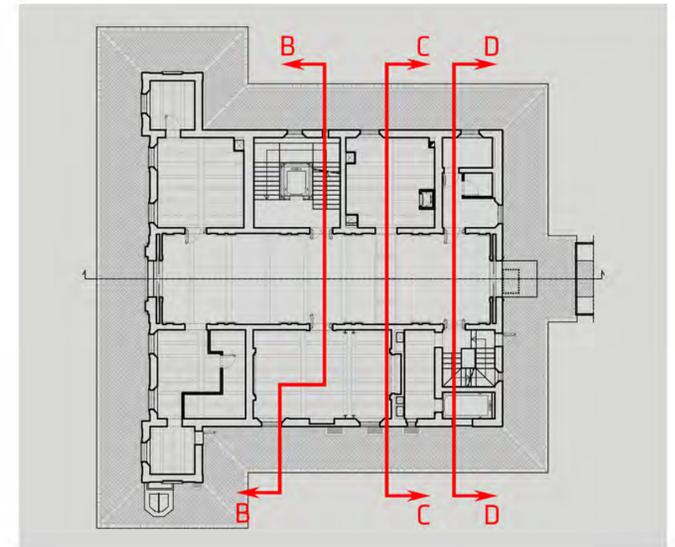
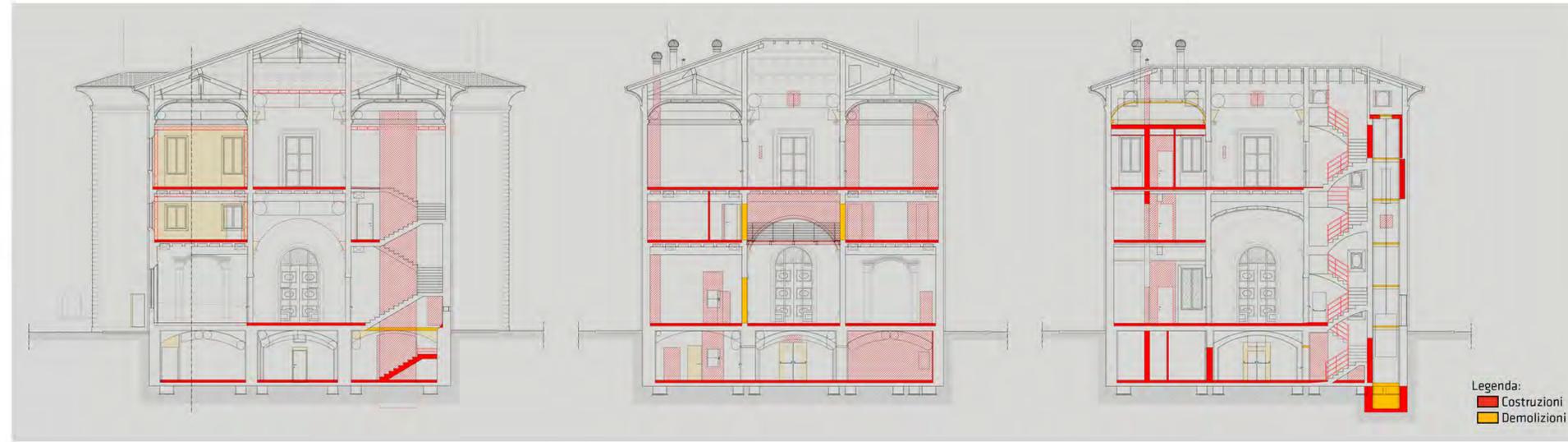
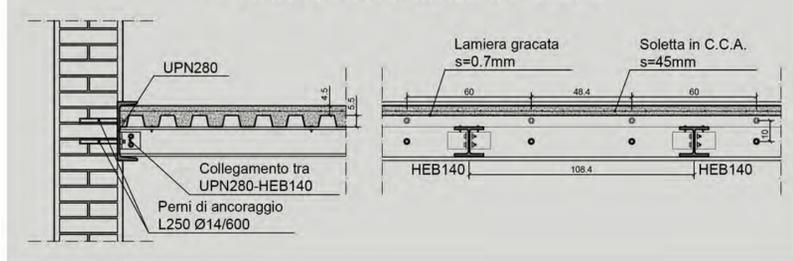
Livello	Vano	Area (m ²)	Superficie Illuminante (m ²)	Rapporto Illuminante	Superficie Ventilante (m ²)	Rapporto Ventilante
Piano Primo	Ripostiglio Aula 4	8,52	2,00	0,235	2,80	0,329
	Aula 4	30,05	4,00	0,133	4,00	0,133
	Vano Scale 1	30,25	2,64	0,087	2,64	0,087
	Aula 5	29,65	2,13	0,072	2,13	0,072
	Bagno	16,89	3,70	0,219	3,70	0,219
	Spazio Espositivo Spazio Ricevimenti	107,68	6,39	0,059	8,12	0,075
	Sala Convegni 3 Sala Ricevimenti 2	63,29	5,40	0,085	5,40	0,085
	Sala Riunioni 2	17,90	1,40	0,078	1,40	0,078
	Disimpegno	8,19	*	*	*	*
	Vano Scale 2	11,29	*	*	*	*
	Ripostiglio Sala Convegni	8,47	2,00	0,236	2,80	0,331
	Superficie Totale	332,18				
Piano Sottotetto	Vano Tecnico U.T.A. e C.T.	18,23	1,71	0,094	1,71	0,094
	Vano Tecnico Ascensore	6,34	1,14	0,180	1,14	0,180
	Superficie Totale	24,57				

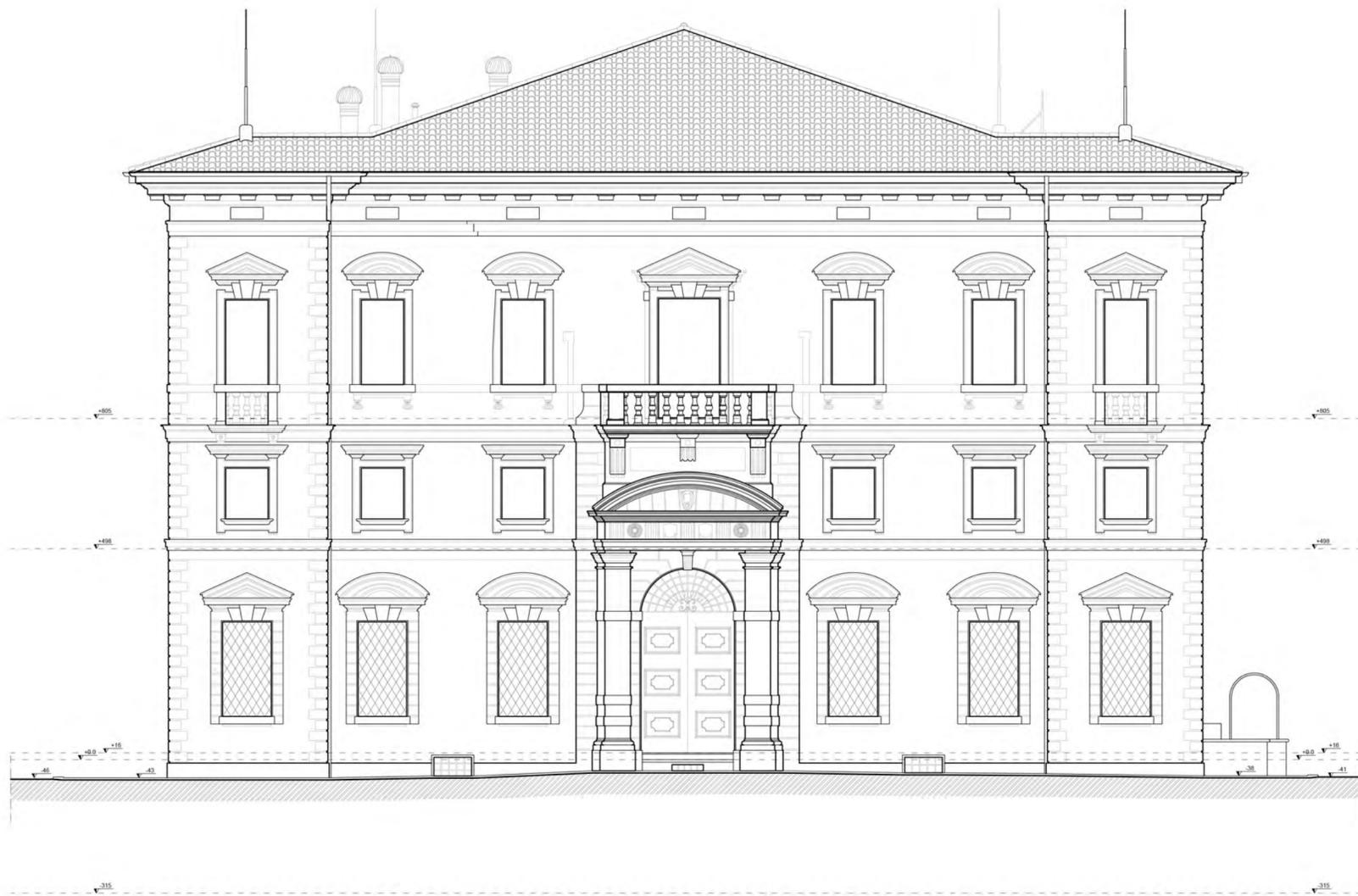
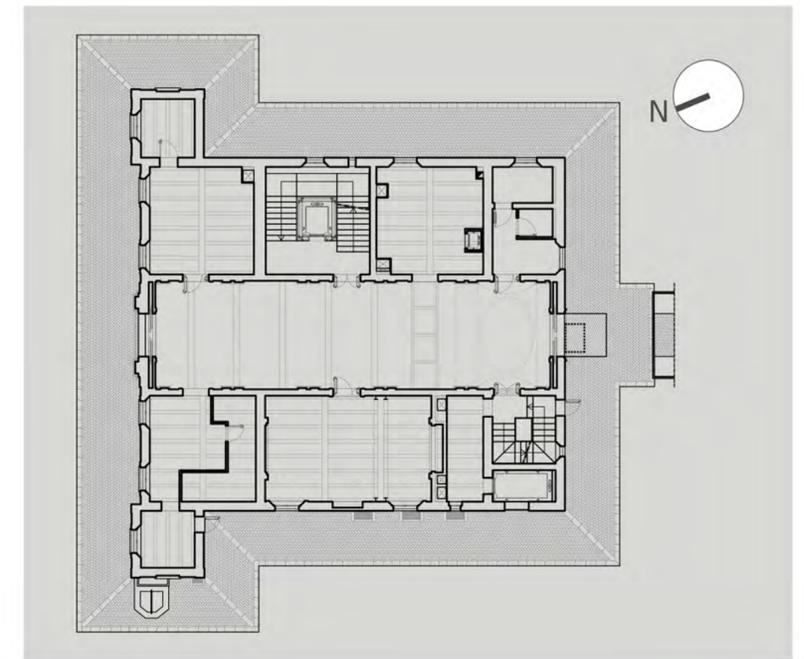
Ogni ambiente è stato dotato di illuminazione artificiale e ventilazione meccanica controllata

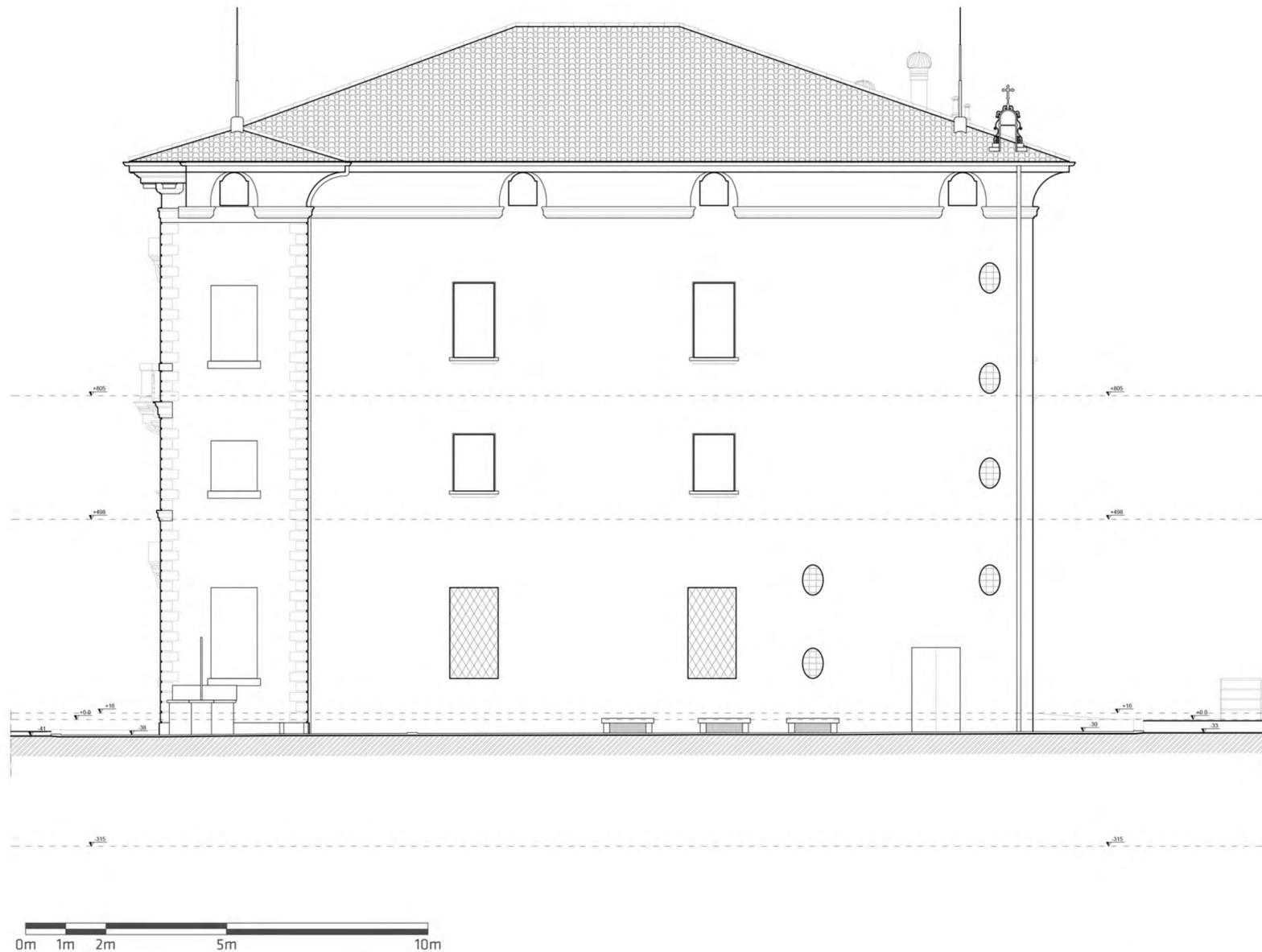
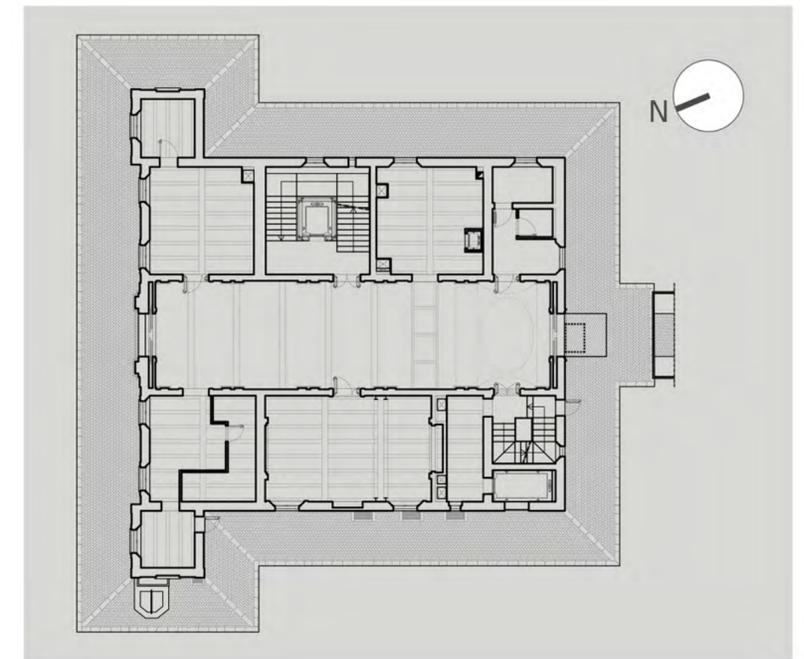
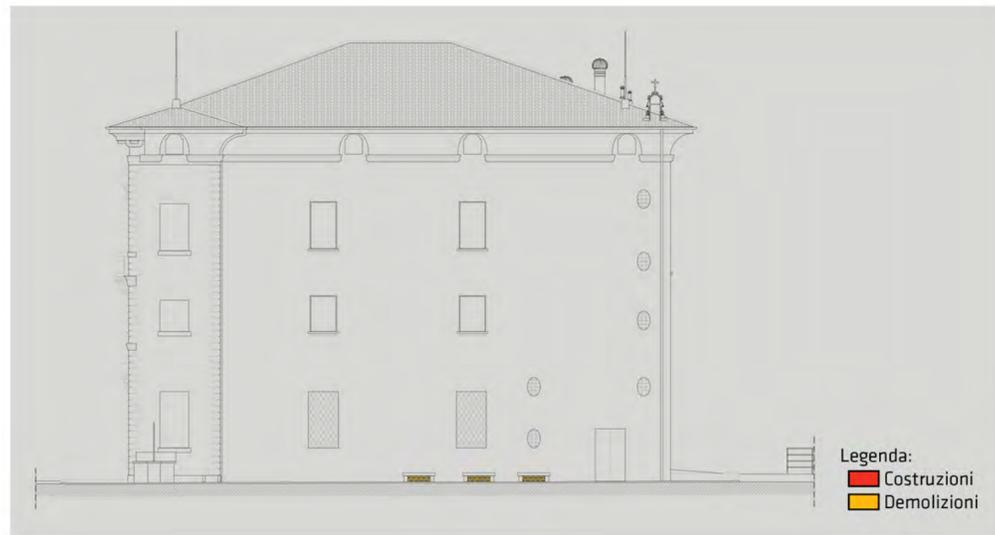


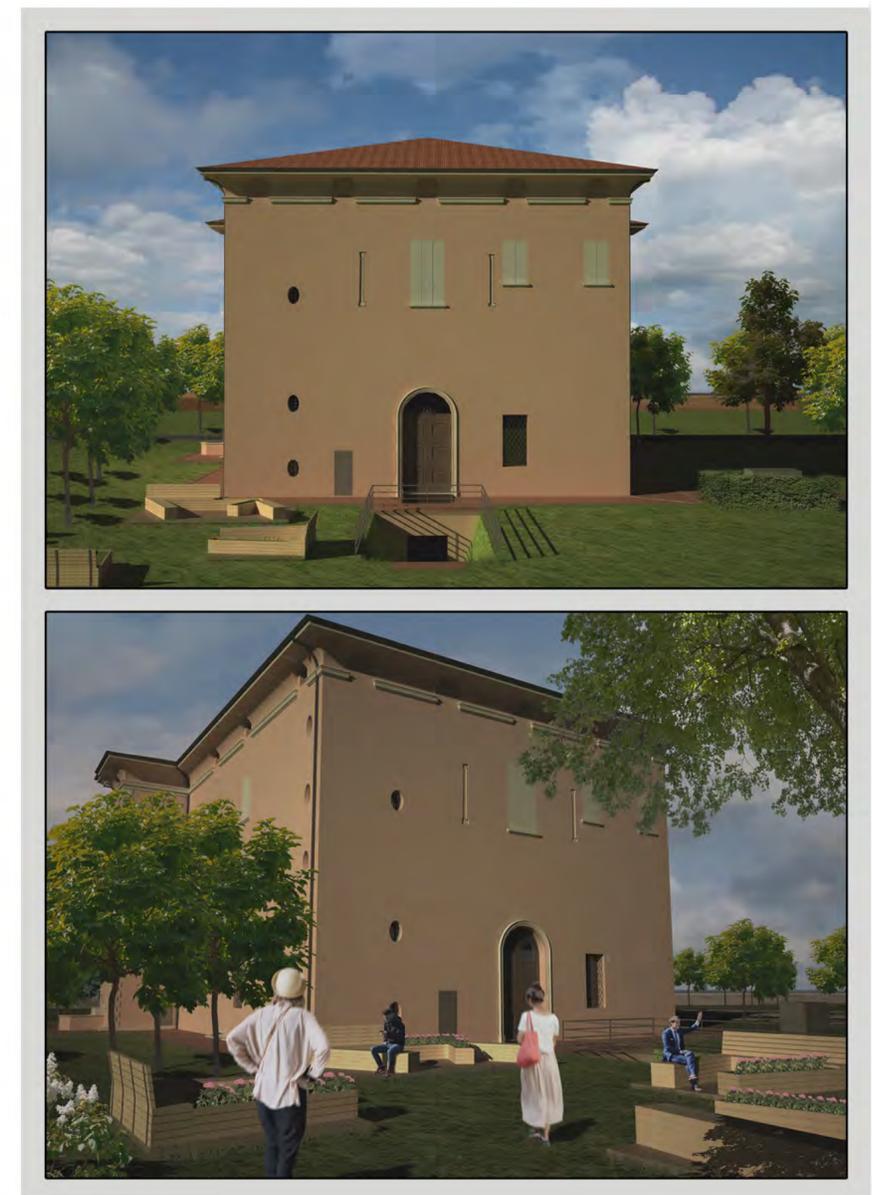
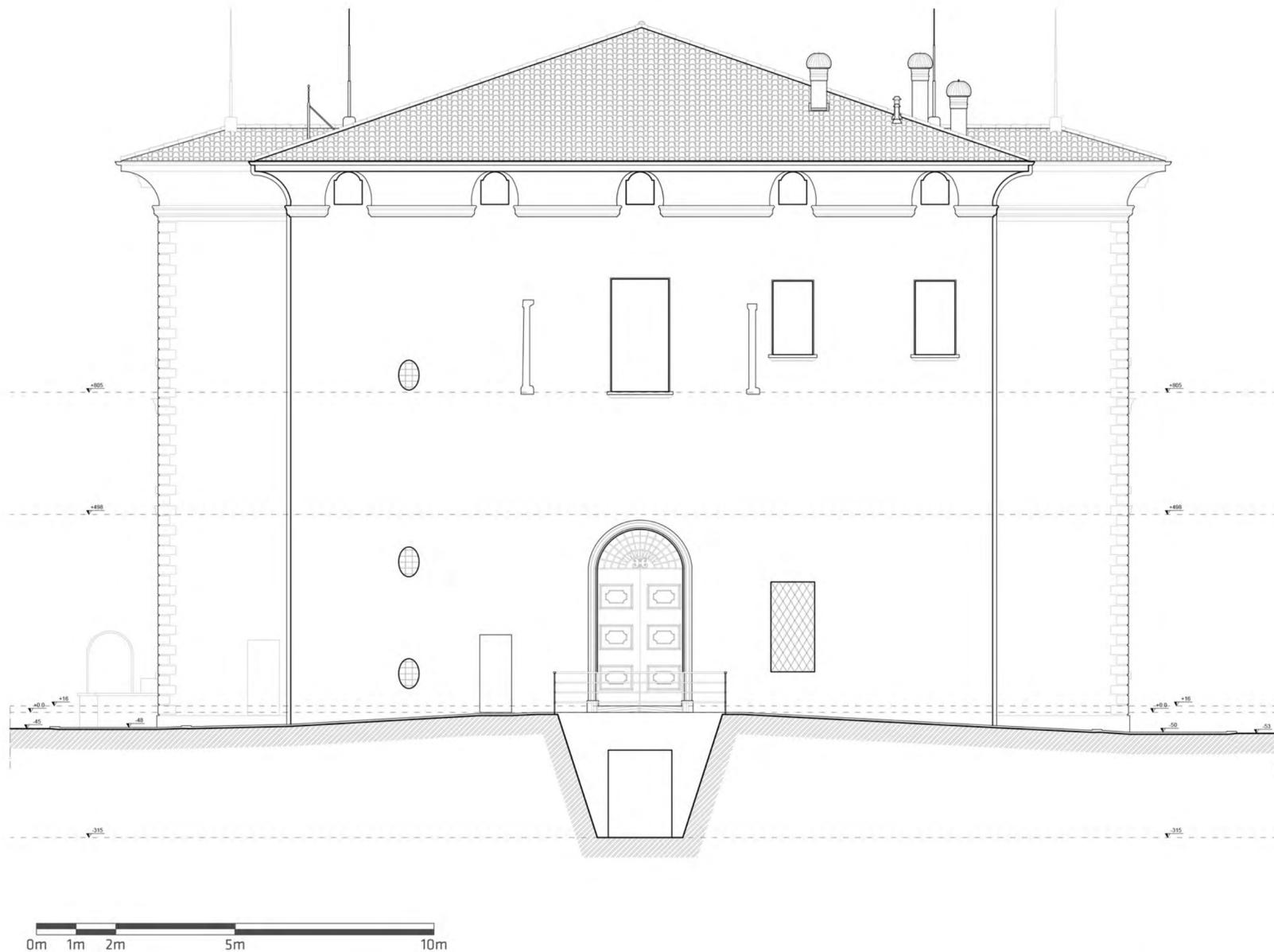
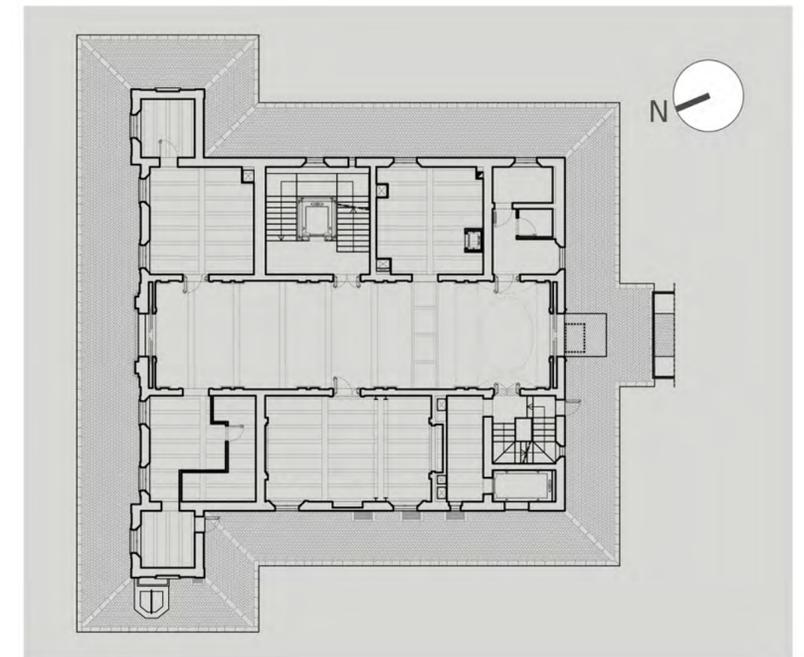
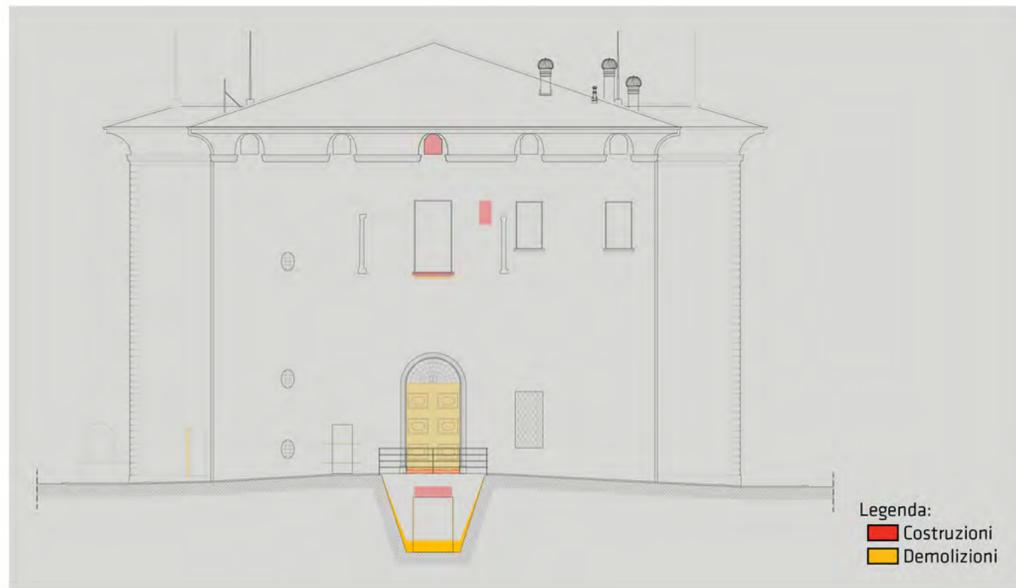


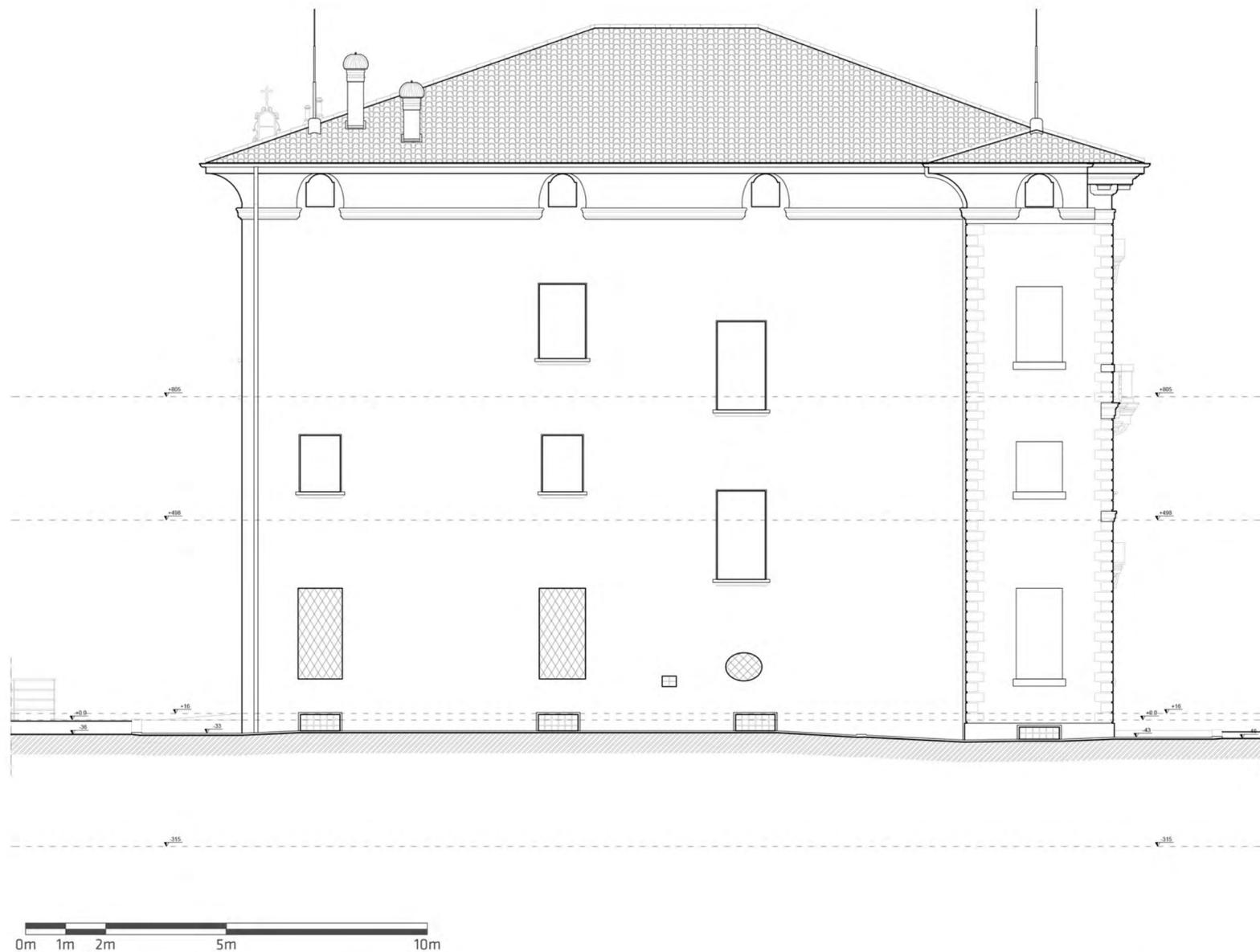
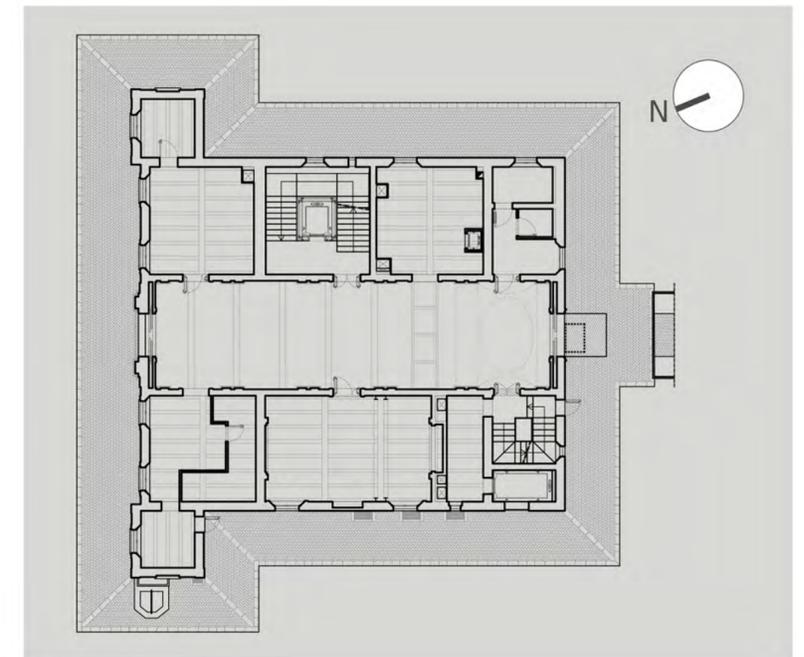
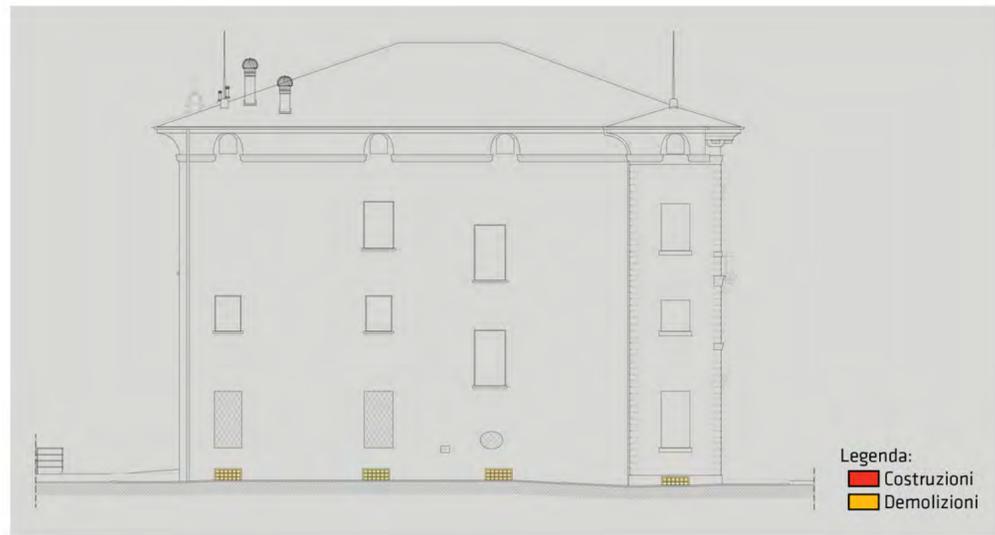
1 - DETAGLIO SOLAIO IN ACCIAIO - SCALA 1:20







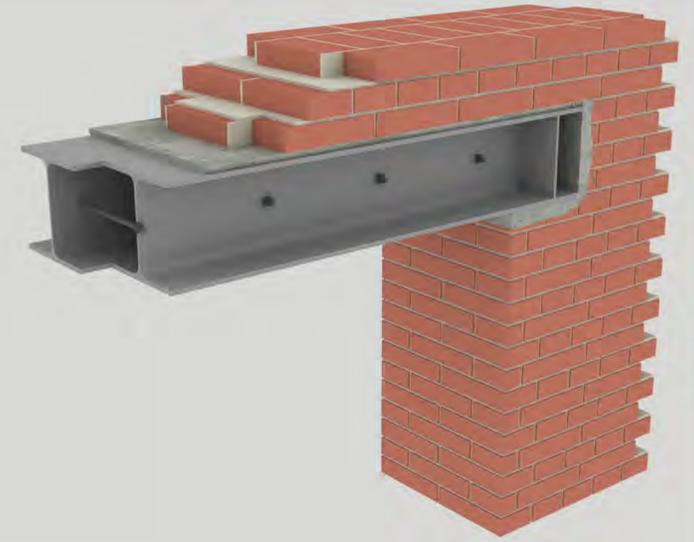
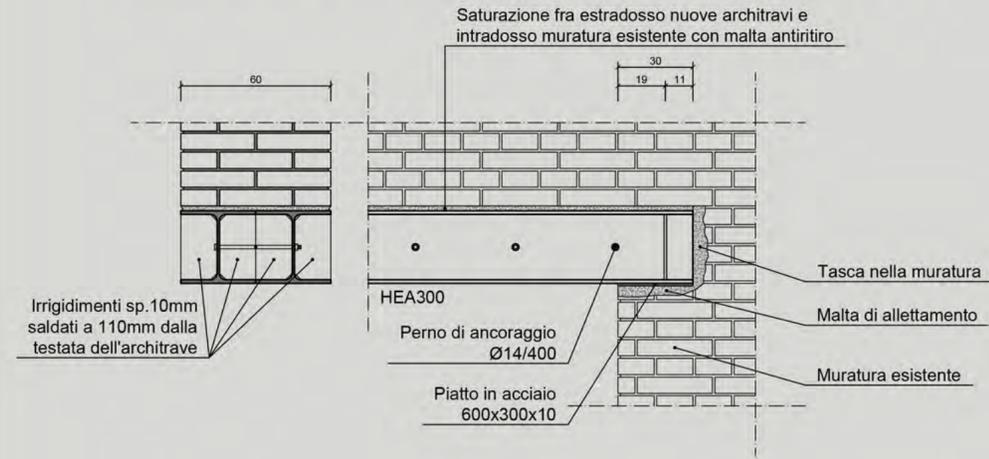




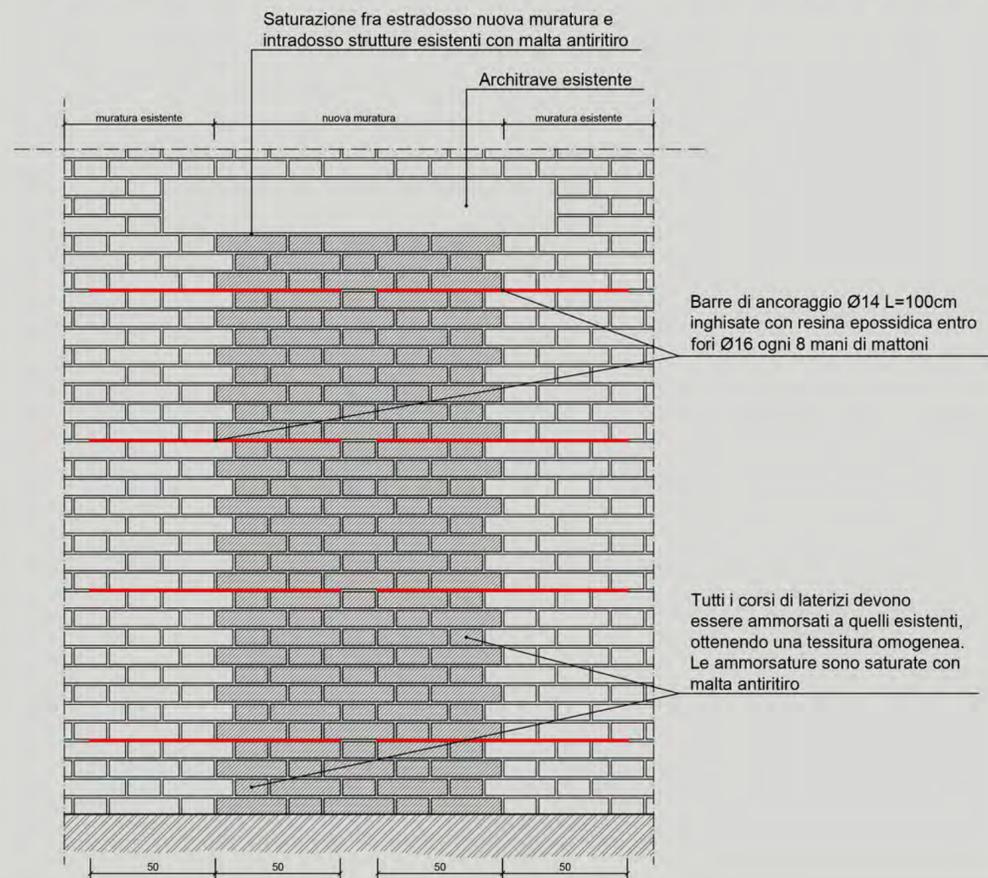
PIANTA INTERVENTI PIANO INTERRATO - SCALA 1:200



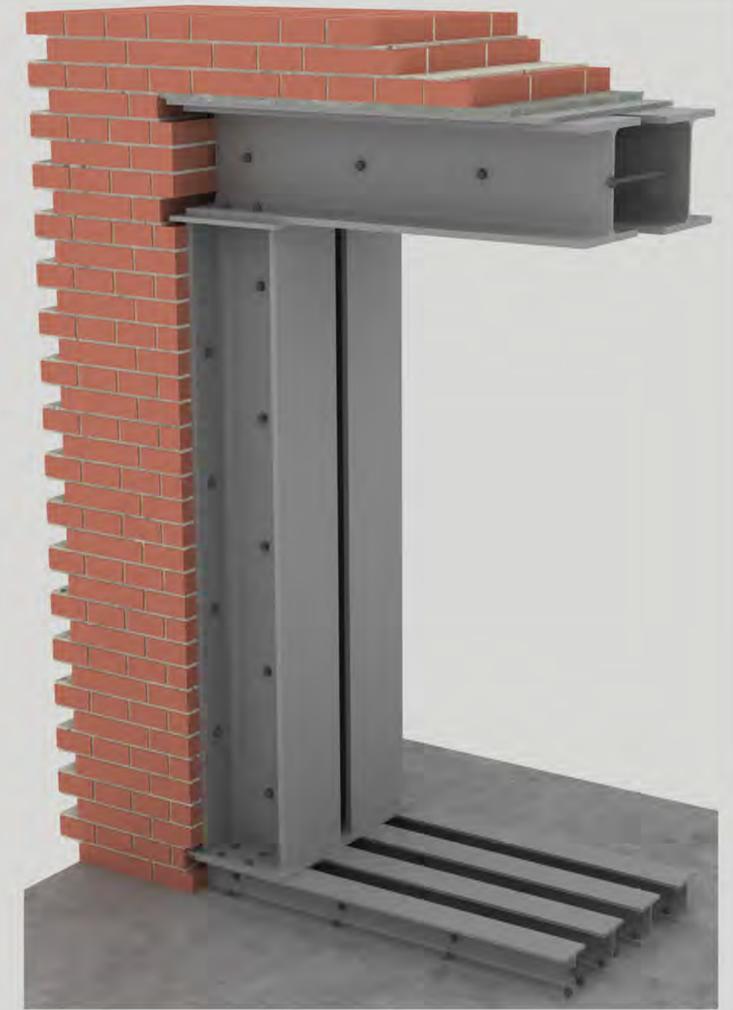
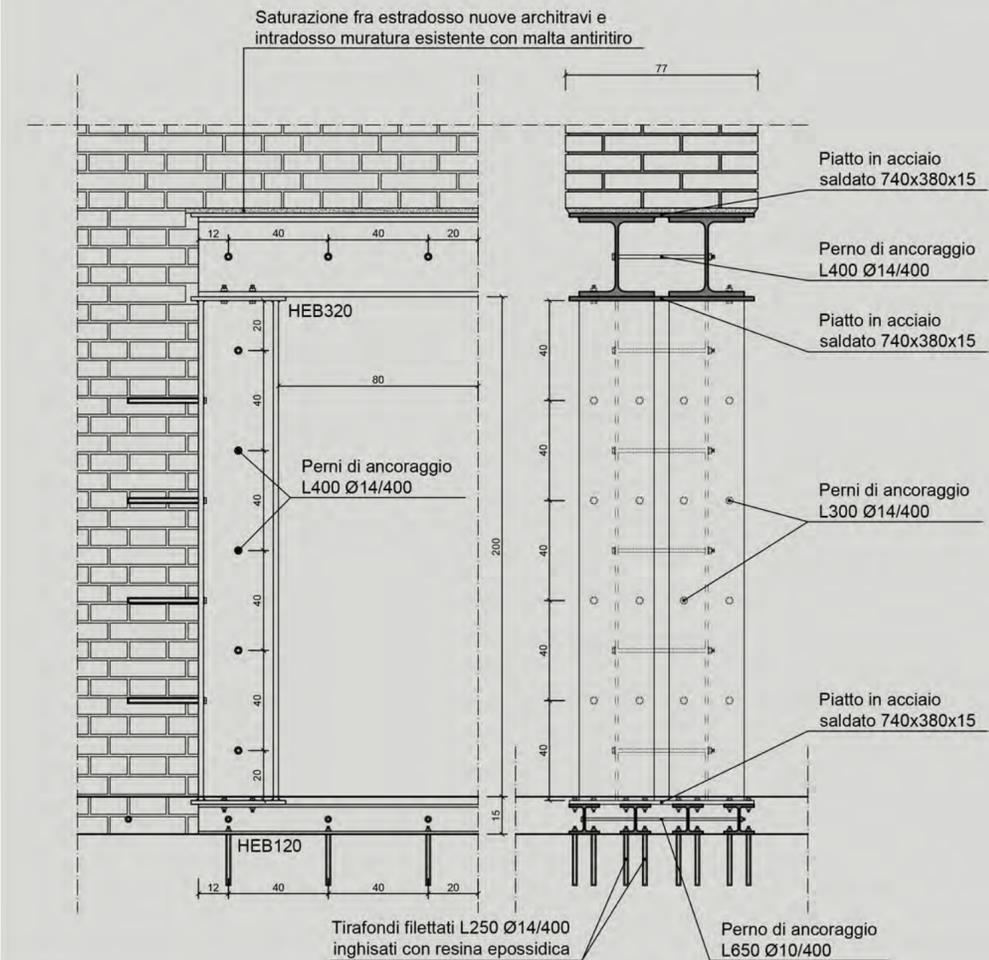
2 - DETTAGLIO ARCHITRAVE METALLICA NUOVA APERTURA - SCALA 1:20



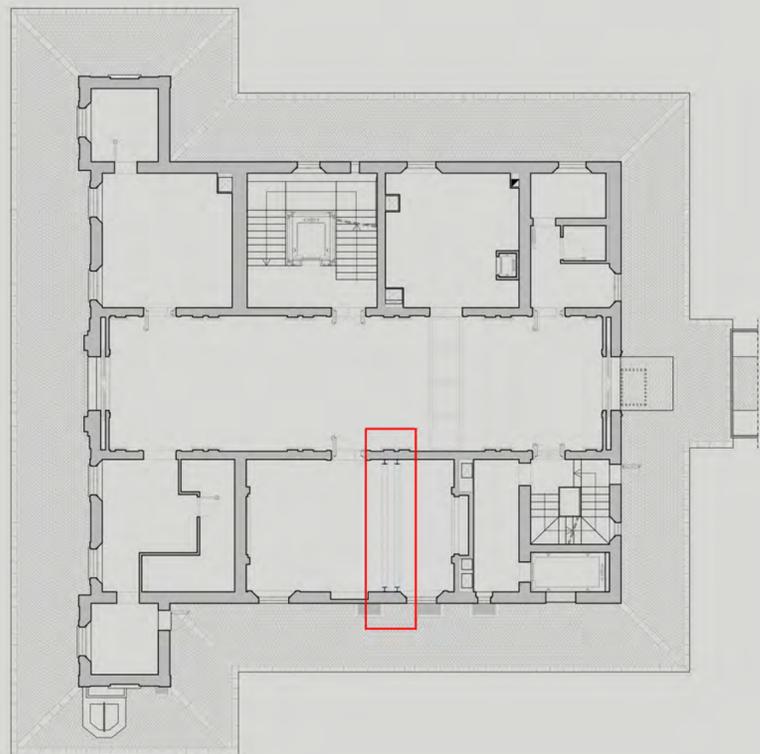
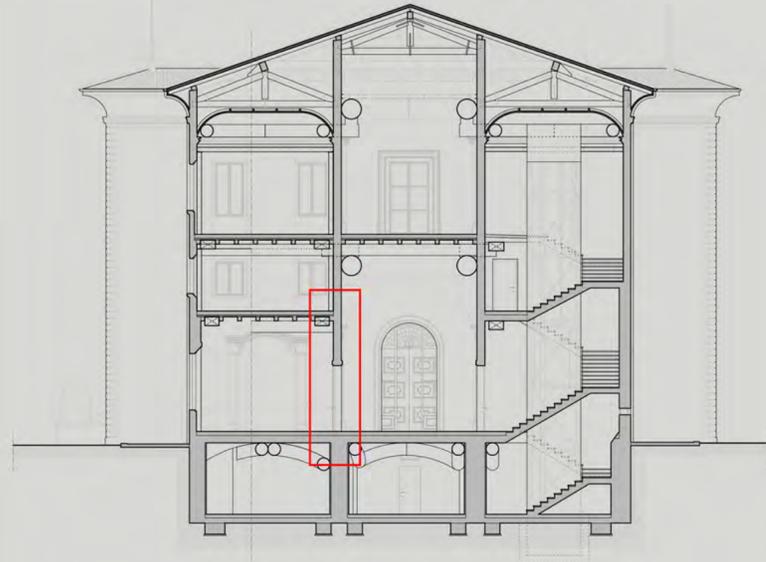
1 - DETTAGLIO CHIUSURA VANO IN UNA PARETE IN MURATURA PORTANTE - SCALA 1:20



3- DETTAGLIO CERCHIATURA METALLICA NUOVA APERTURA - SCALA 1:20

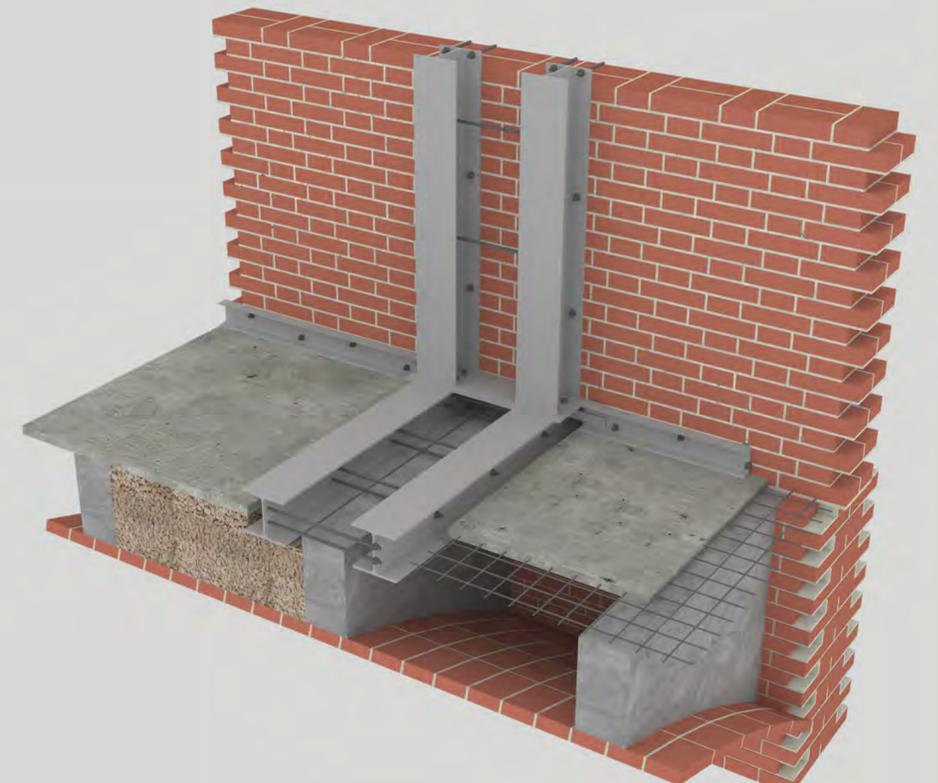
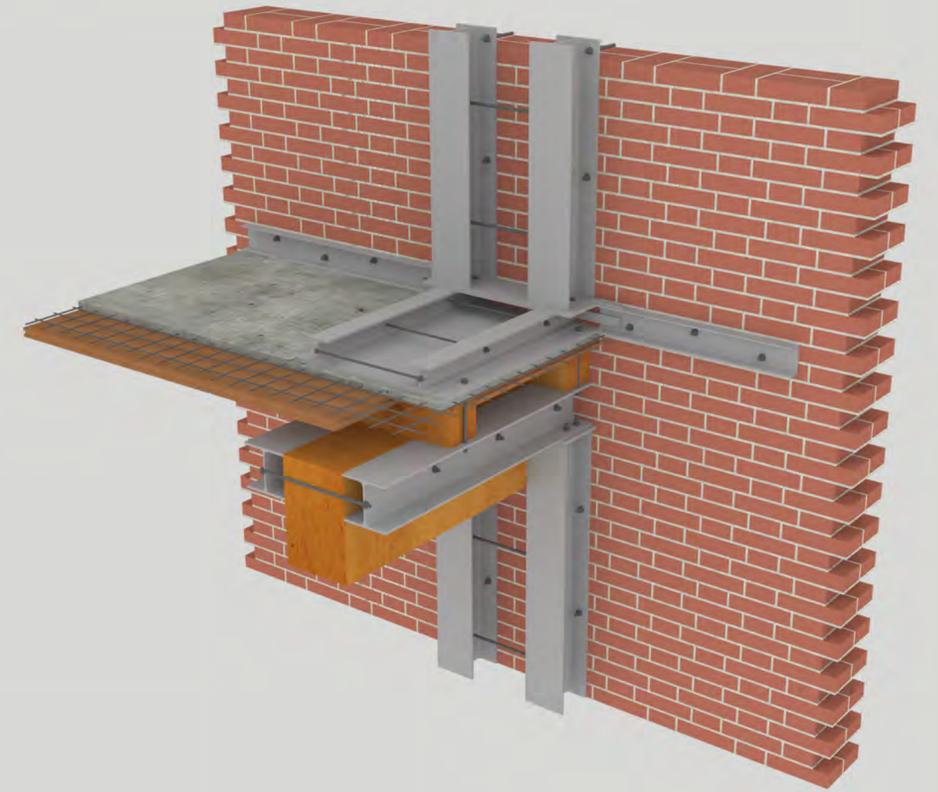
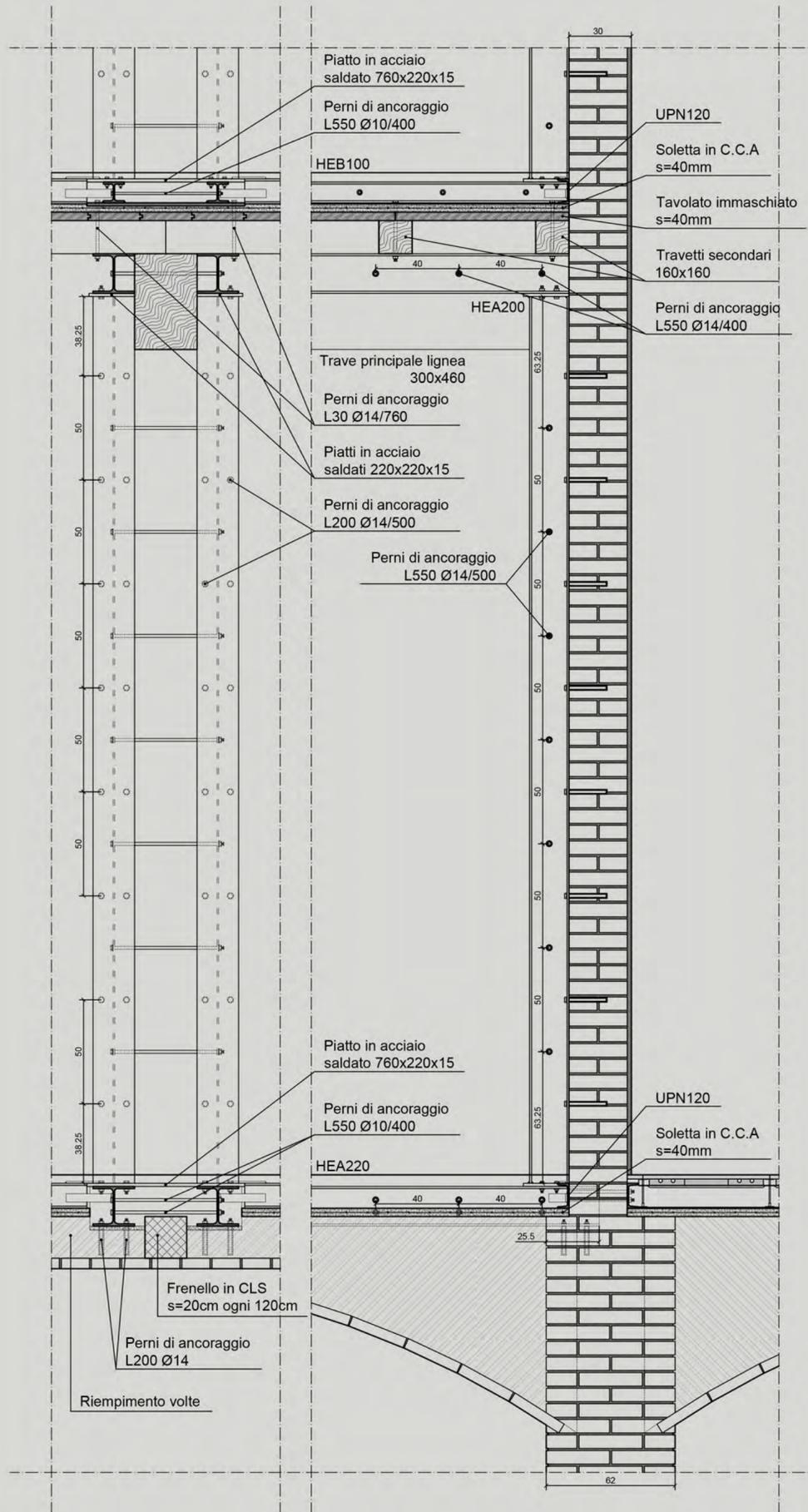


PIANTA PIANO TERRA E SEZIONE - SCALA 1:200

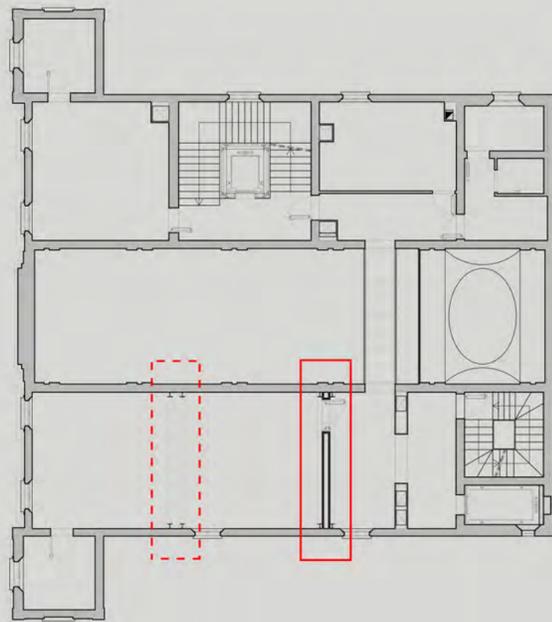
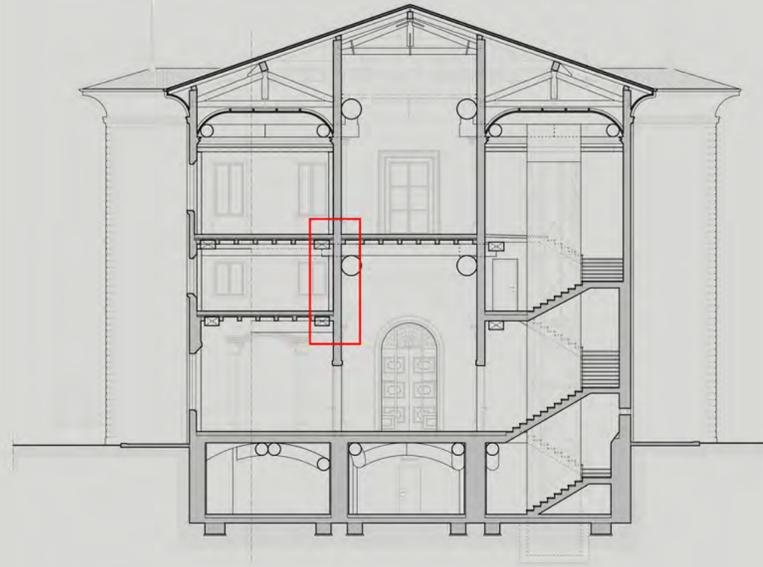


0m 2m 4m 10m 20m

DETTAGLIO PORTALE METALLICO CONTROVENTO POSTO AL PIANO TERRA - SCALA 1:20

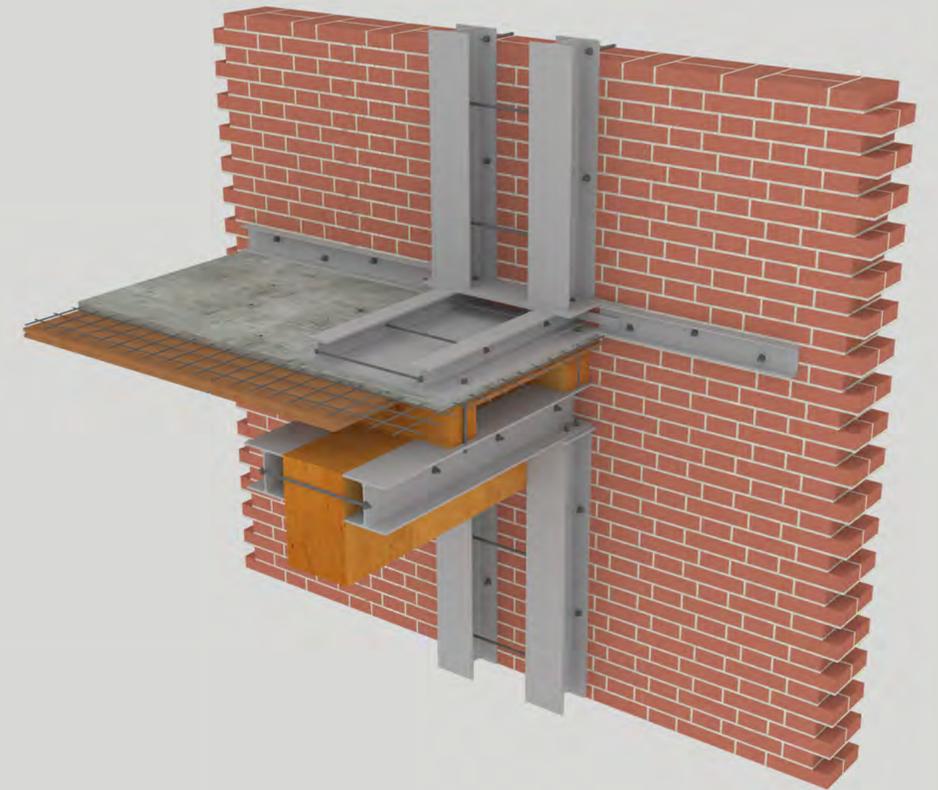
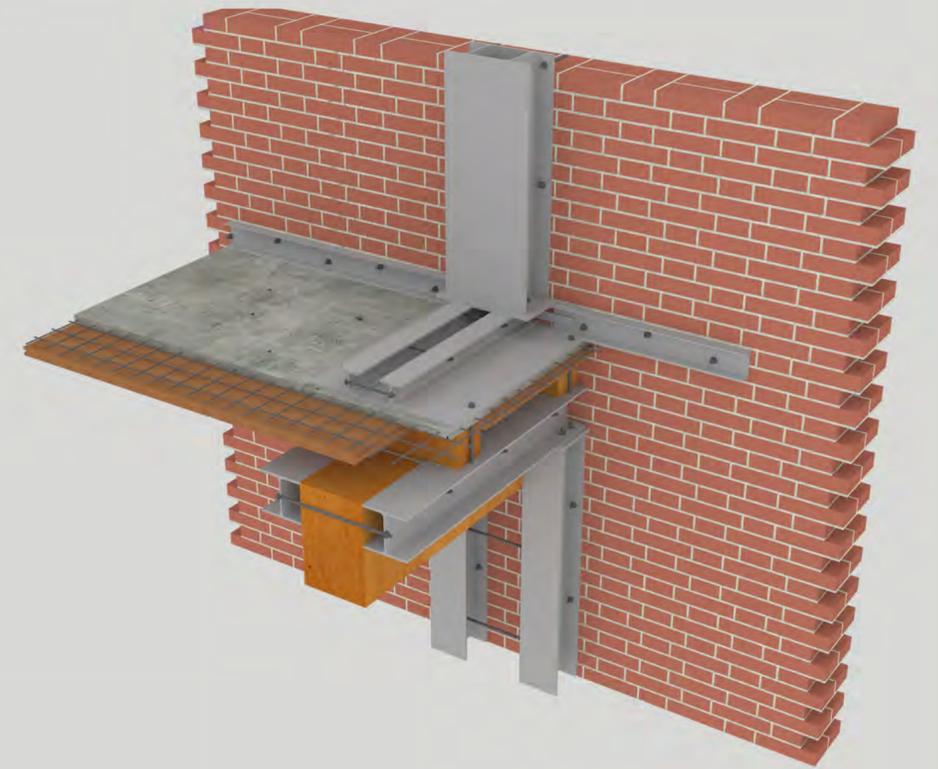
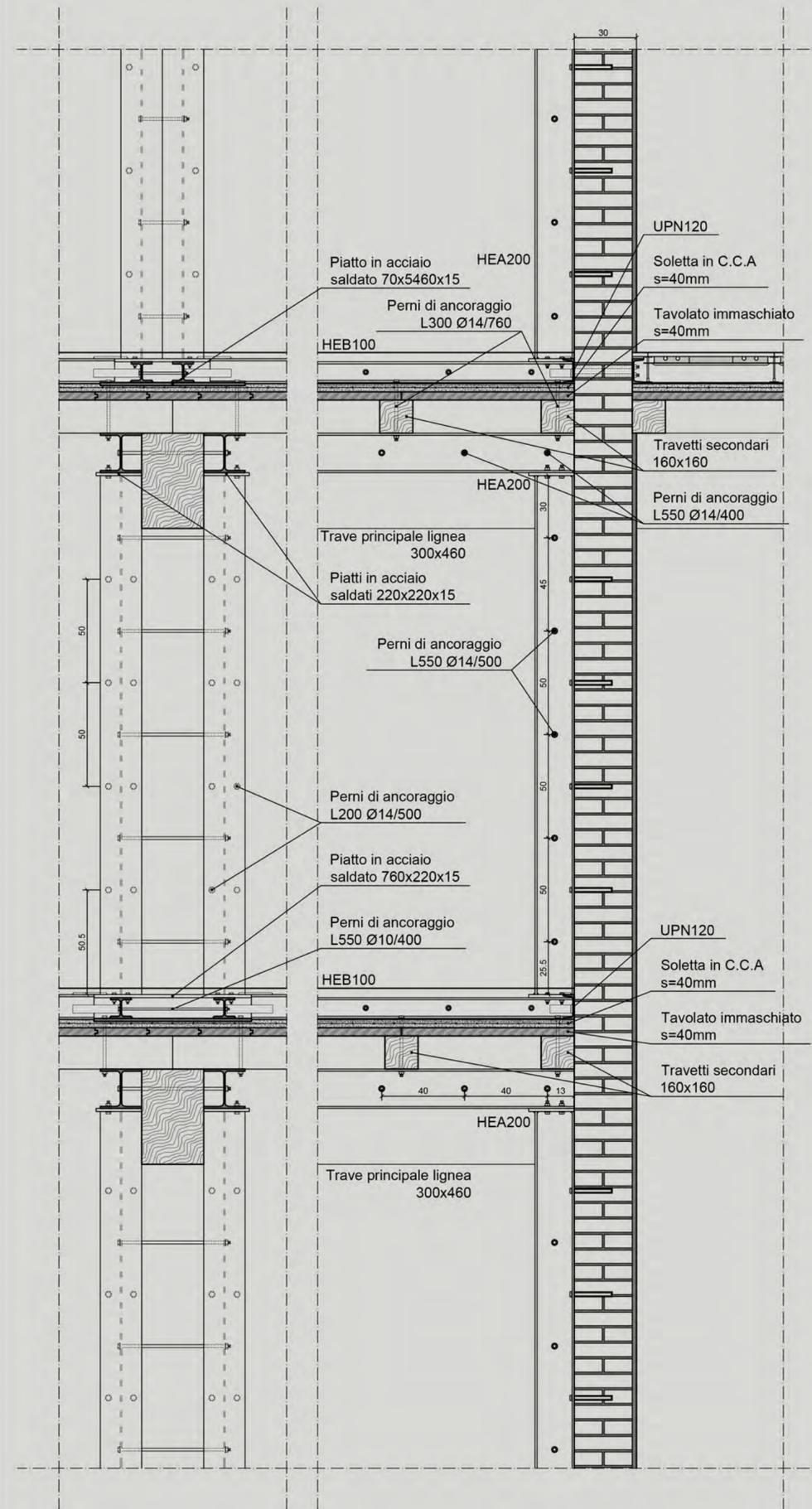


PIANTA PIANO AMMEZZATO E SEZIONE - SCALA 1:200

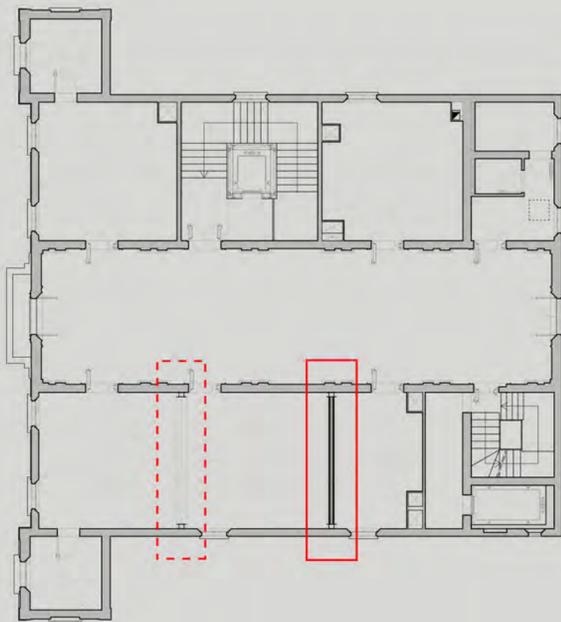
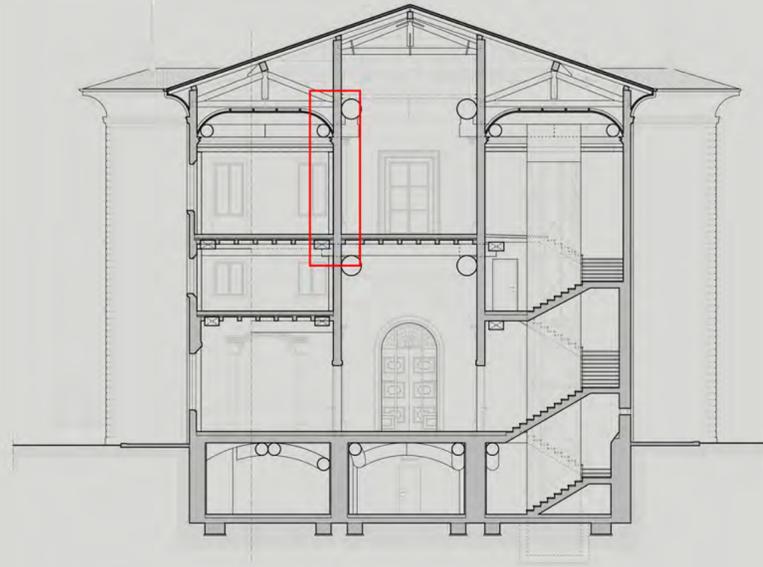


0m 2m 4m 10m 20m

DETTAGLIO PORTALE METALLICO CONTROVENTO POSTO AL PIANO AMMEZZATO - SCALA 1:20

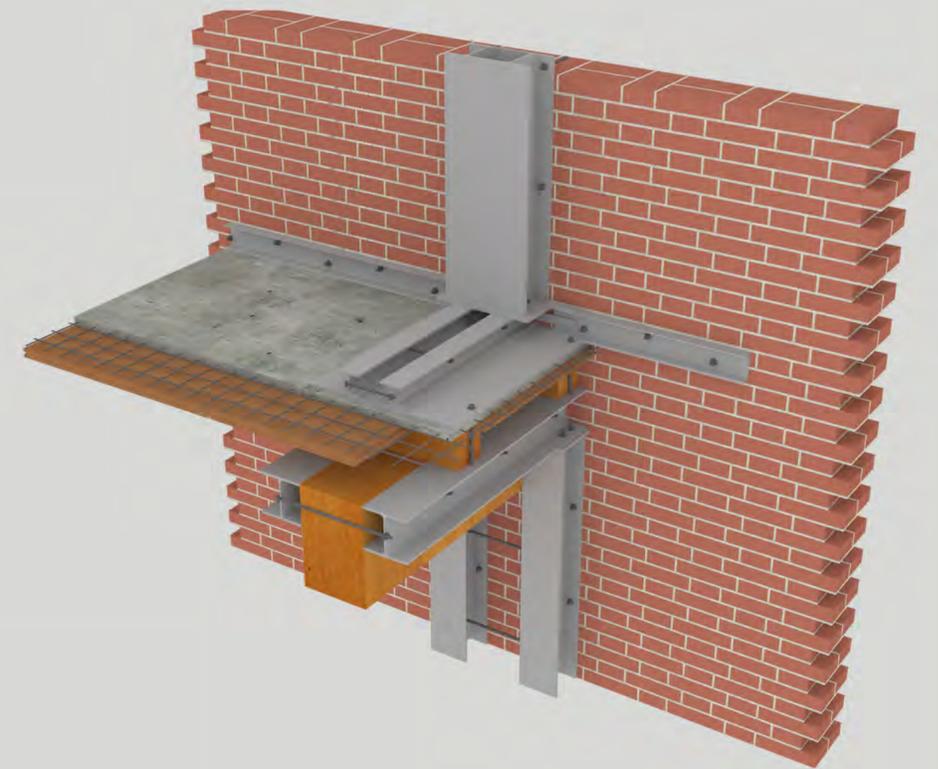
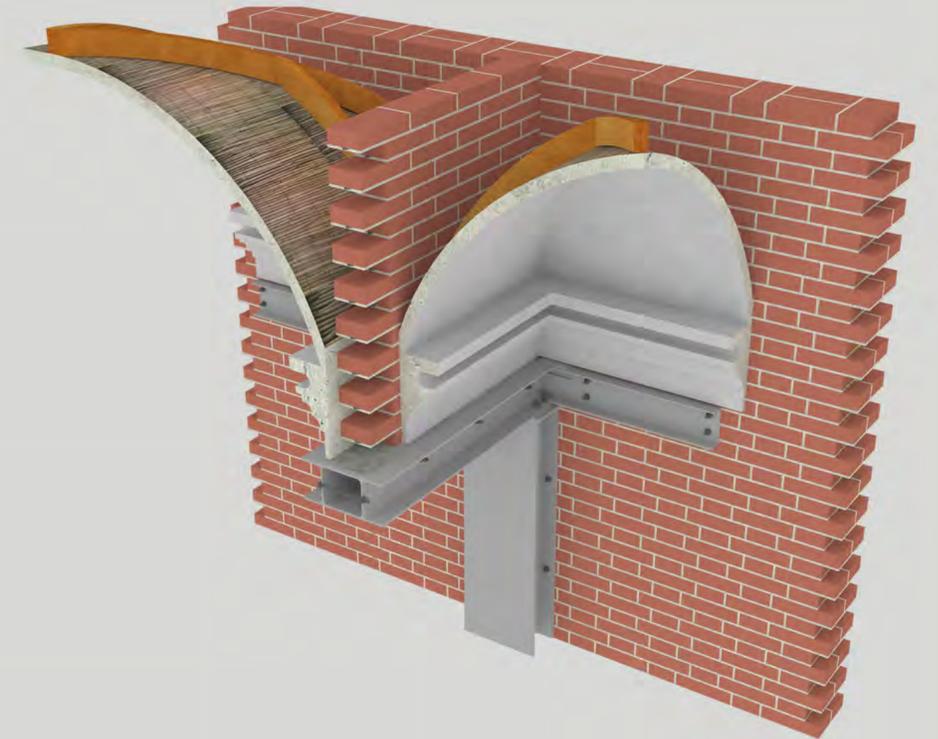
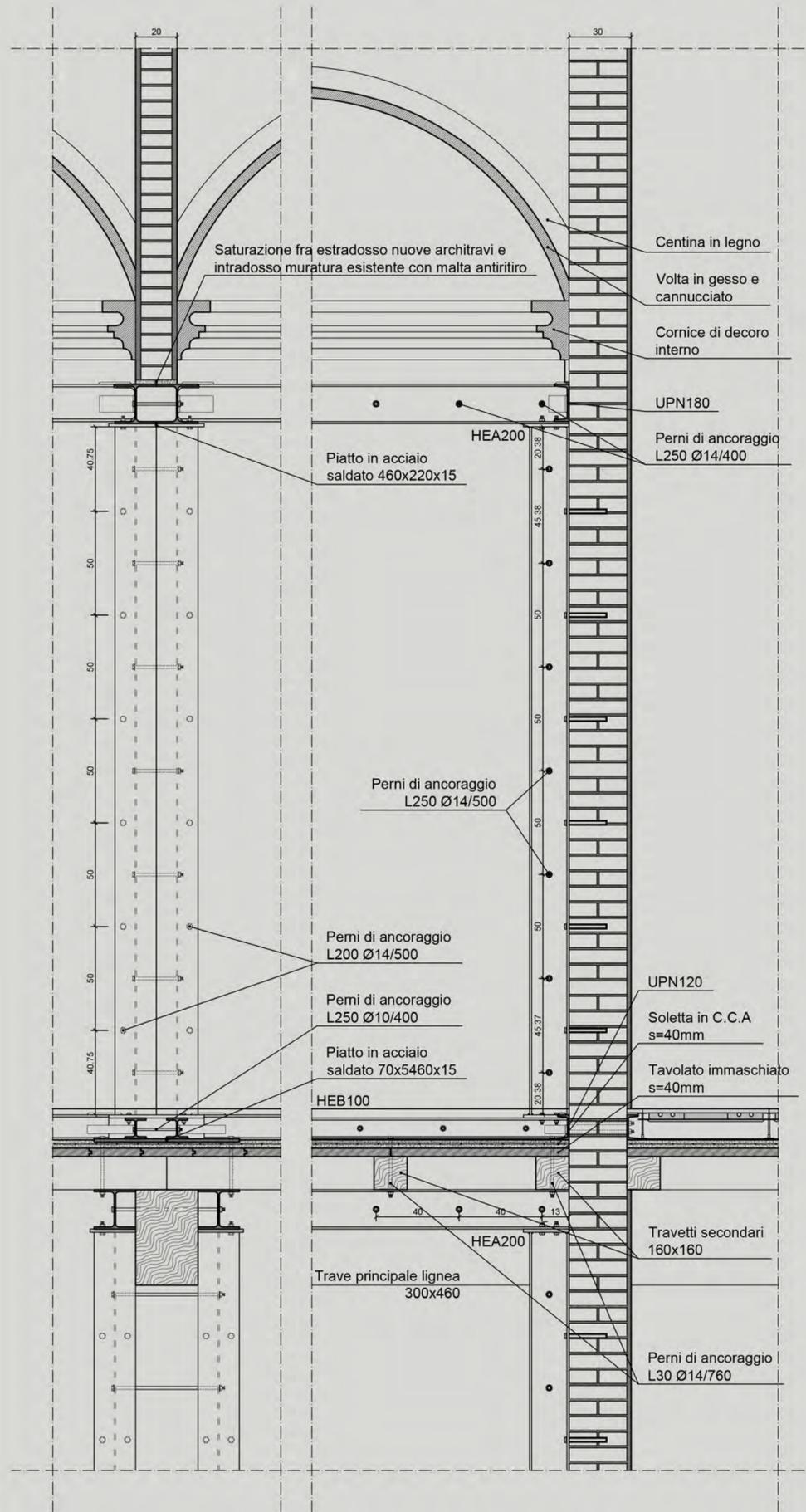


PIANTA PIANO PRIMO E SEZIONE - SCALA 1:200

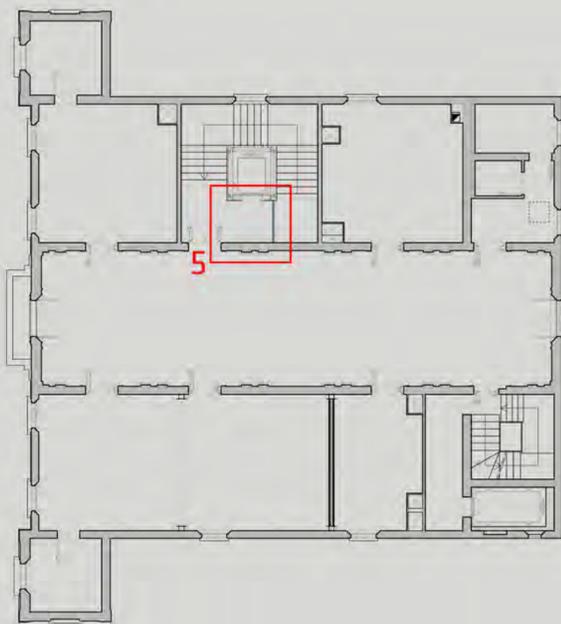
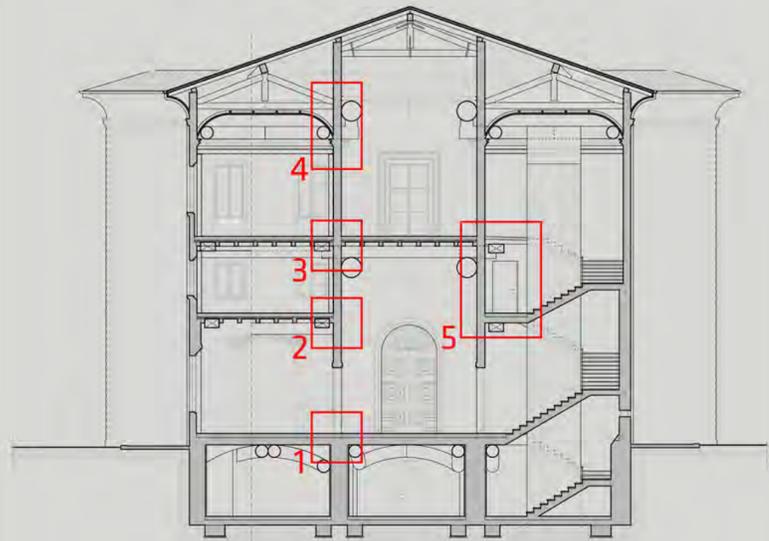


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DETTAGLIO PORTALE METALLICO CONTROVENTO POSTO AL PIANO PRIMO - SCALA 1:20

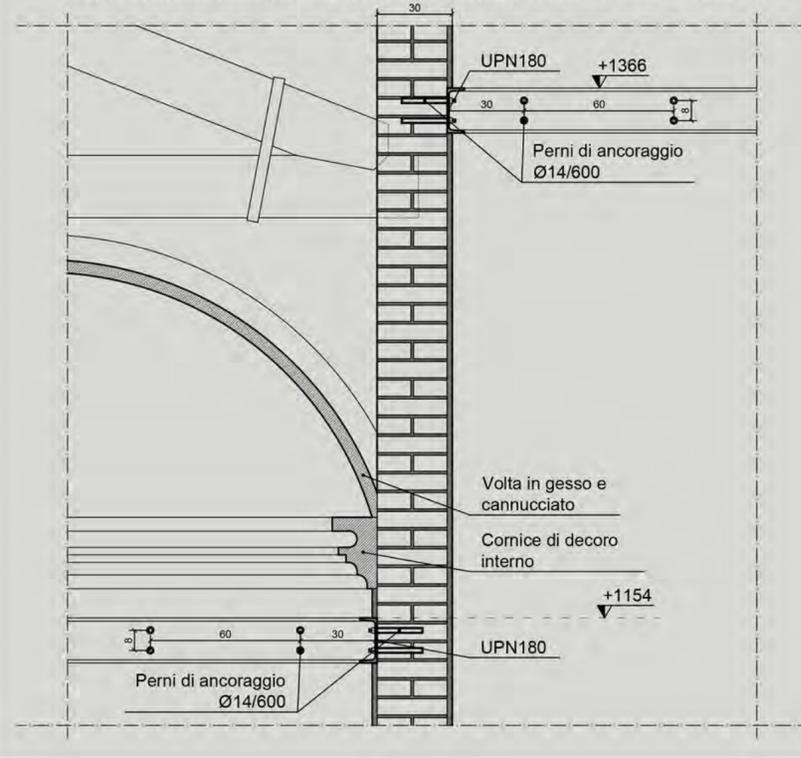


PIANTA PIANO PRIMO E SEZIONE - SCALA 1:200

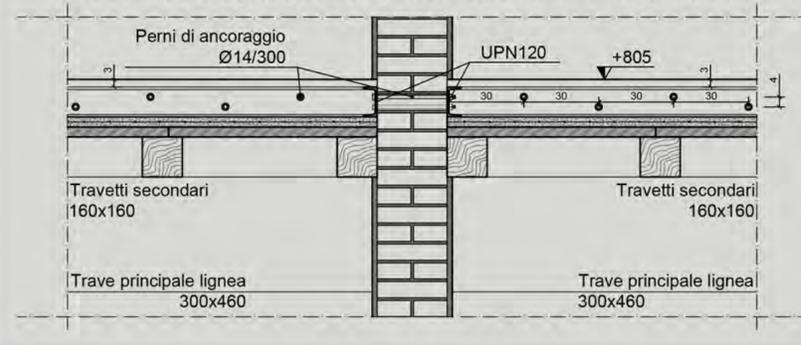


0m 2m 4m 10m 20m

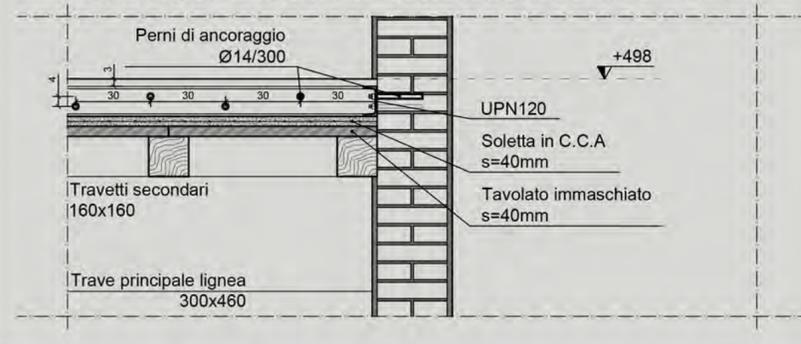
4- DETAGLIO CORDOLO ESTERNO NODO PPRIMO - PTETTO - SCALA 1:20



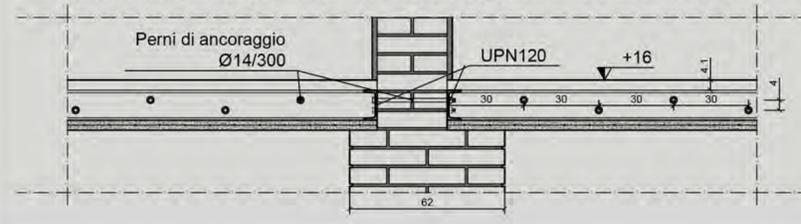
3- DETAGLIO CORDOLO ESTERNO NODO PAMM - PPRIMO - SCALA 1:20



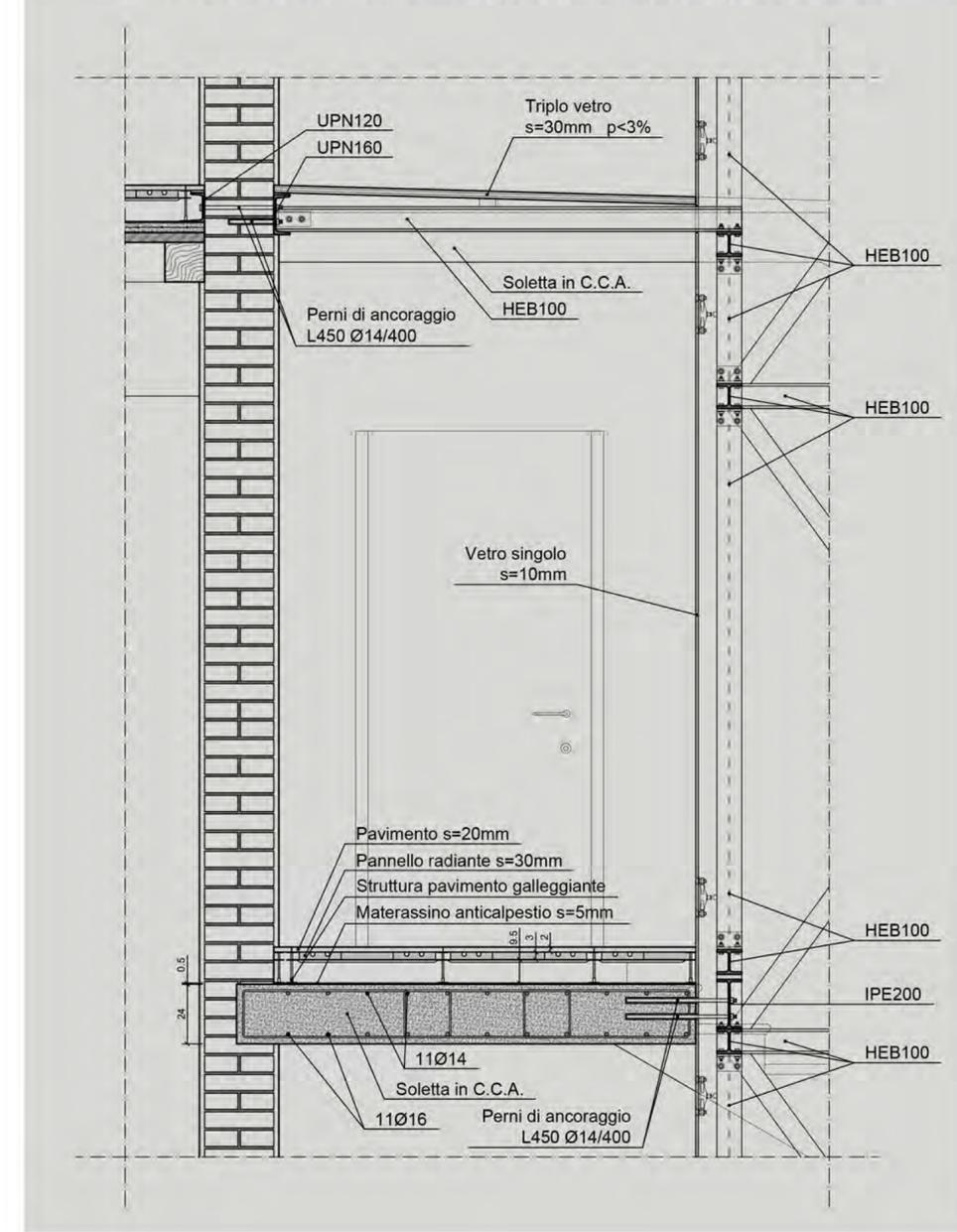
2- DETAGLIO CORDOLO ESTERNO NODO PTERRA - PAMM - SCALA 1:20



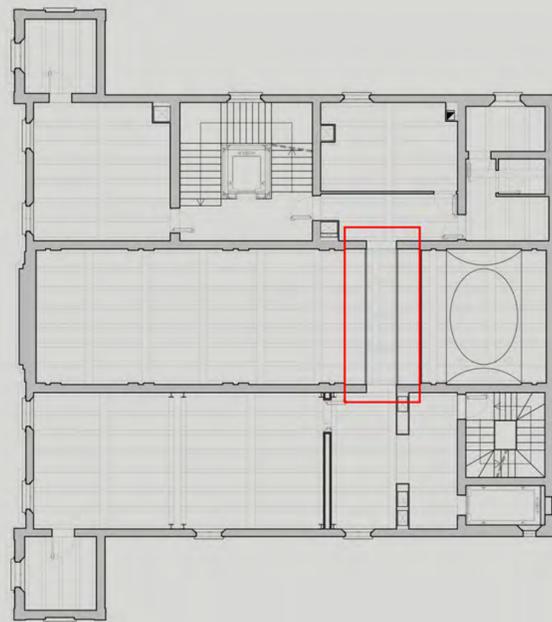
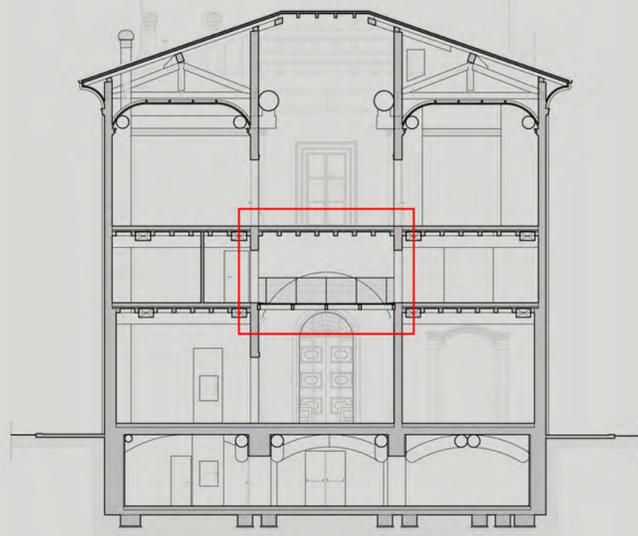
1- DETAGLIO CORDOLO ESTERNO NODO PINT - PTERRA - SCALA 1:20



5 - DETTAGLIO COLLEGAMENTO ASCENSORE SOLETTA SCALE - SCALA 1:20

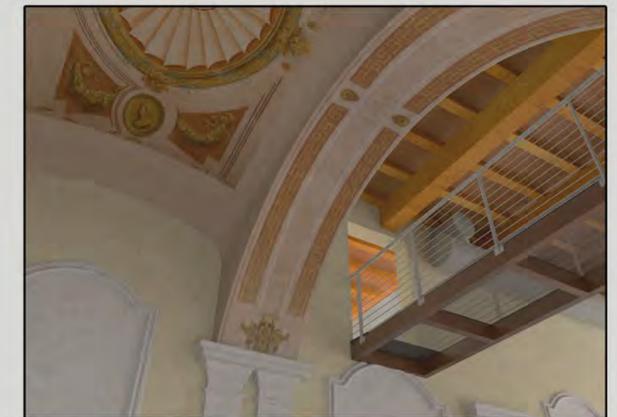
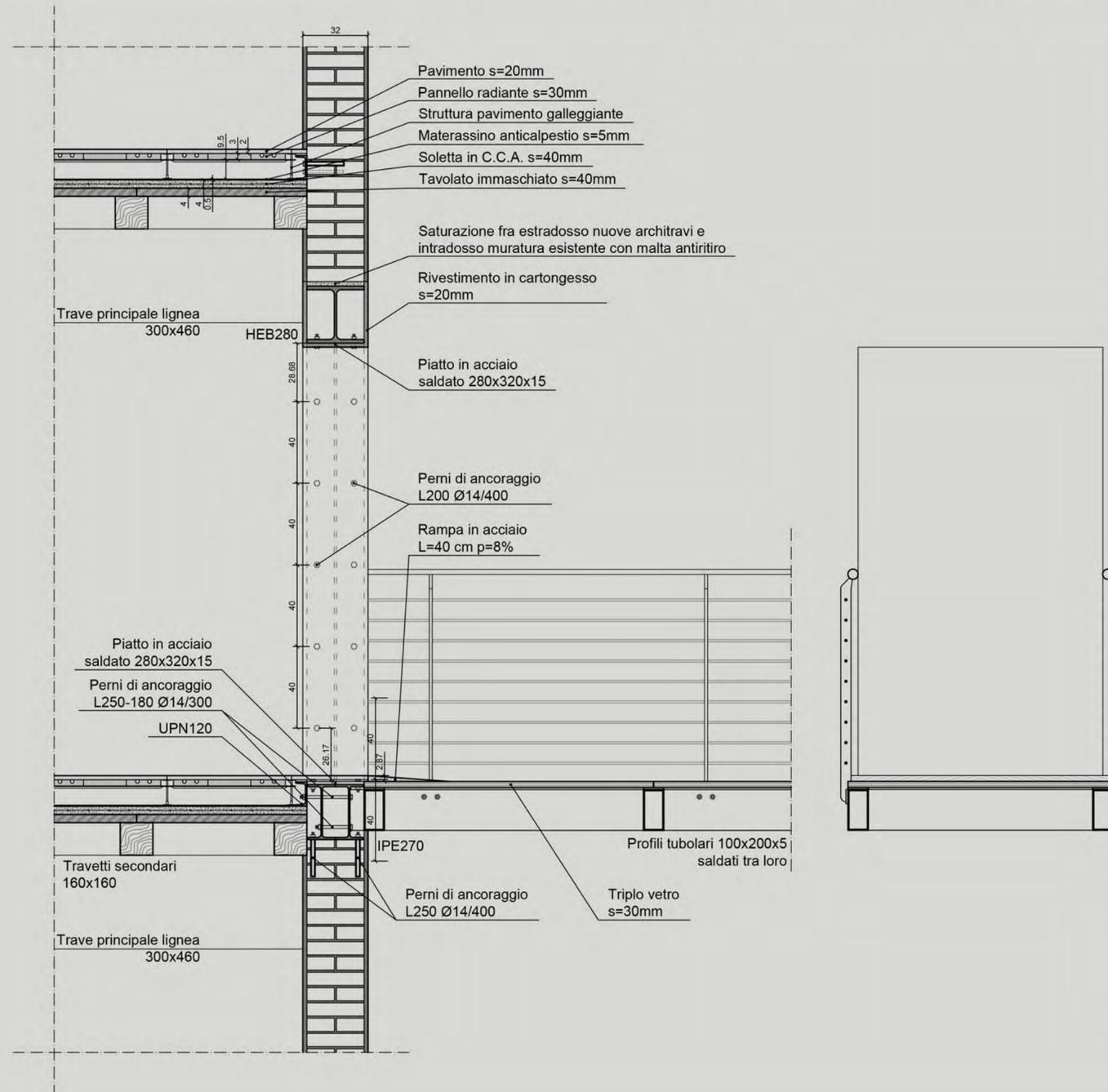


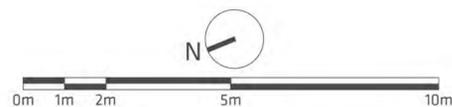
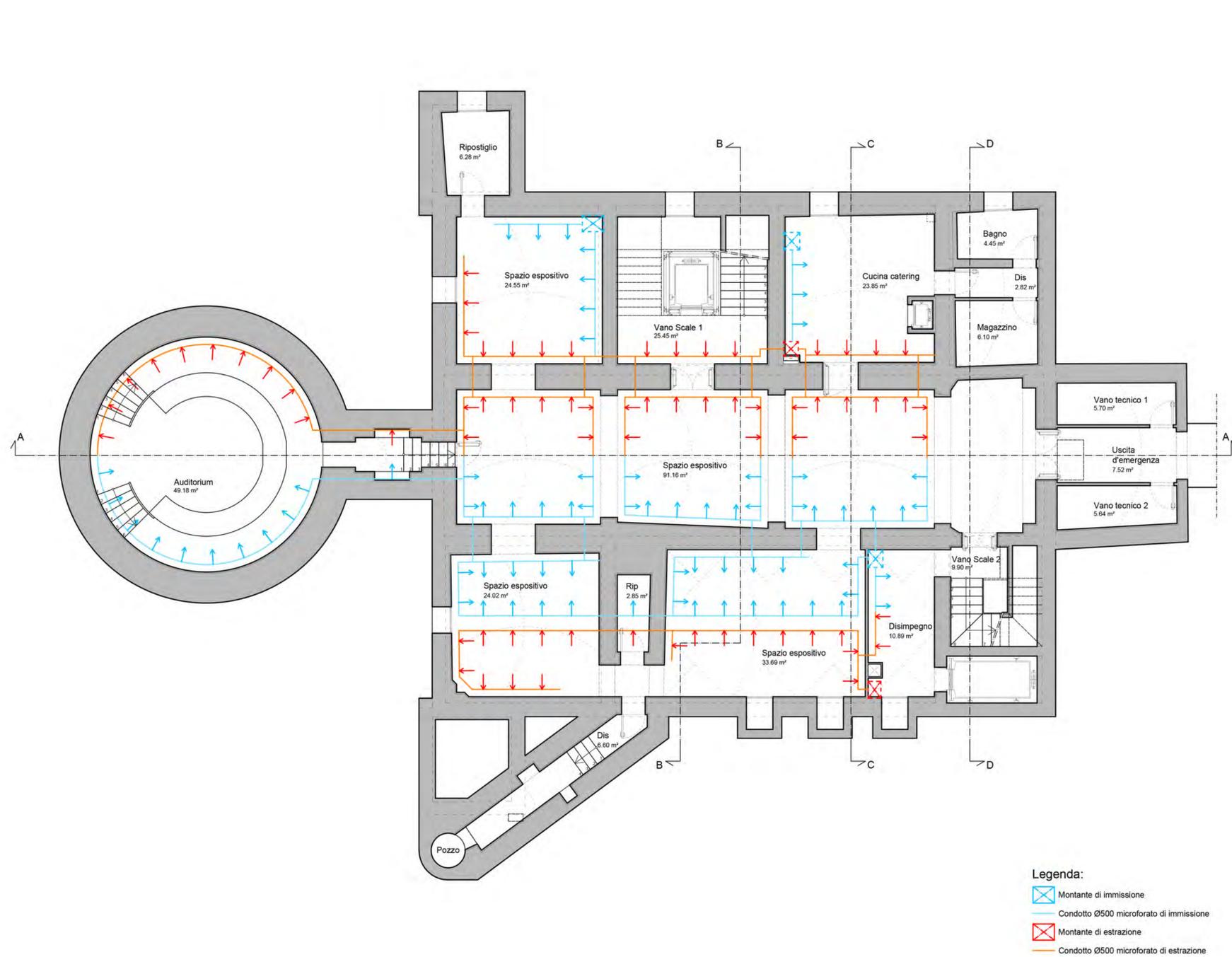
PIANTA PIANO PRIMO E SEZIONE - SCALA 1:200

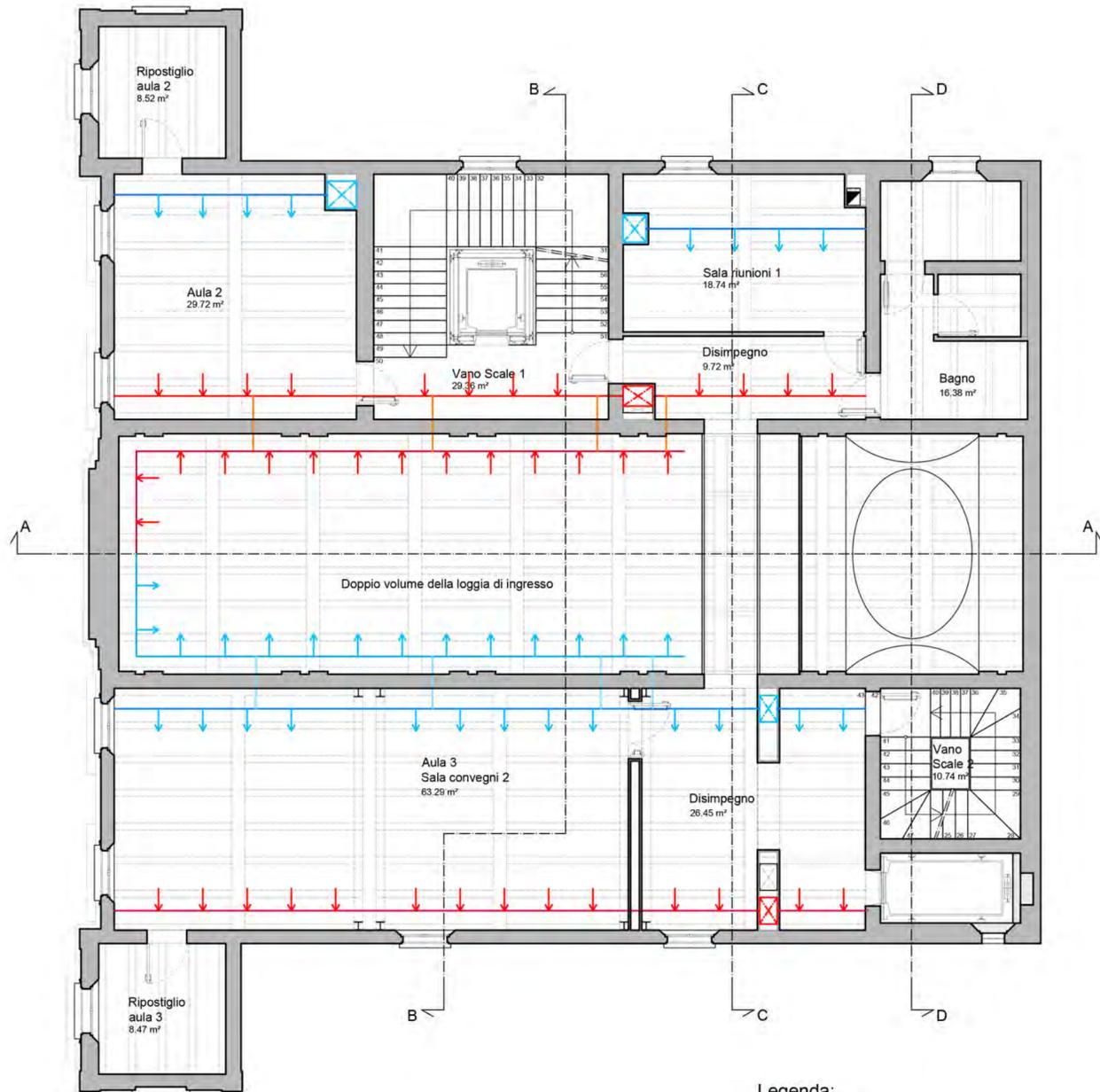


0m 2m 4m 10m 20m

DETTAGLIO PASSERELLA IN VETRO - ACCIAIO POSTA AL PIANO AMMEZZATO - SCALA 1:20

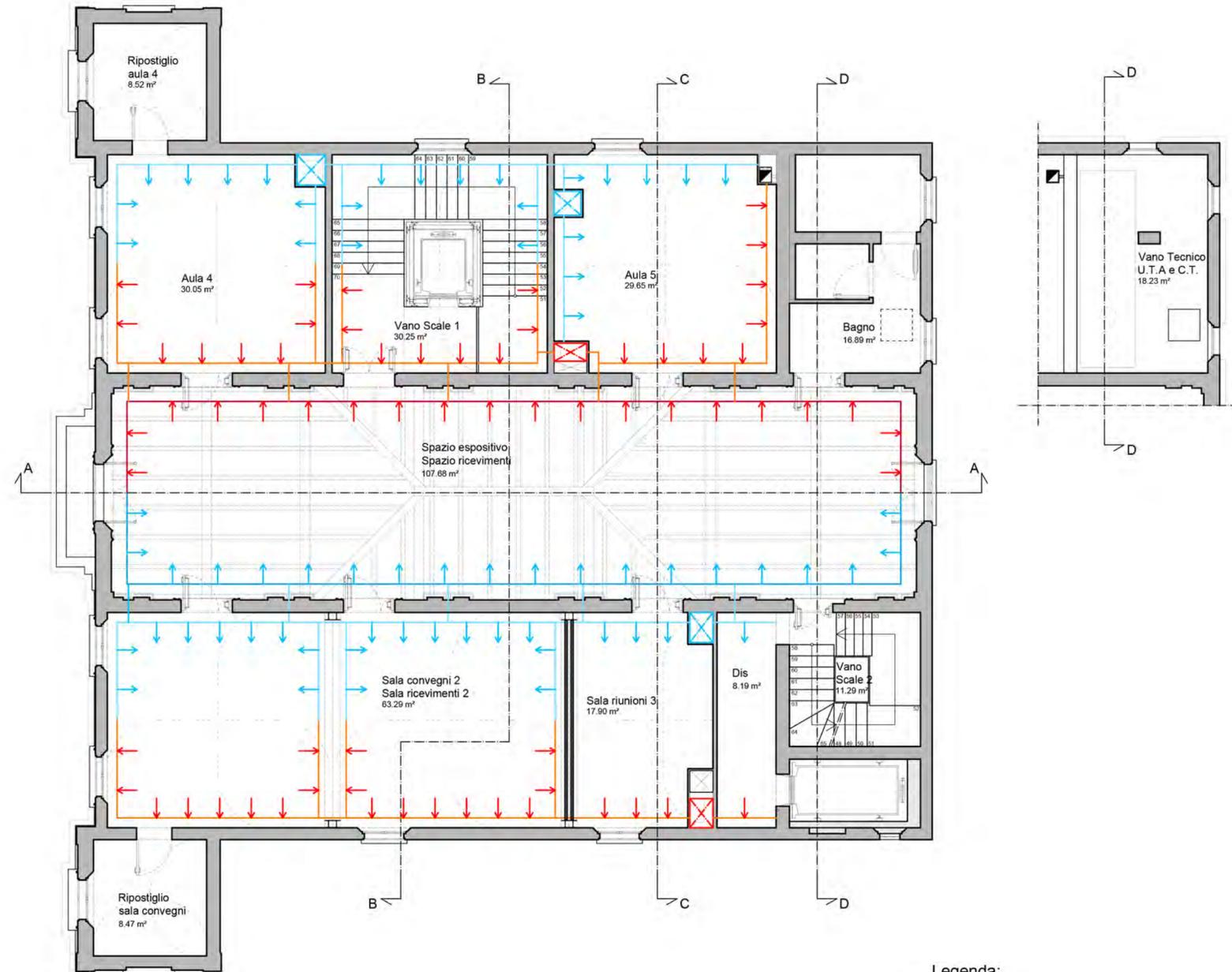






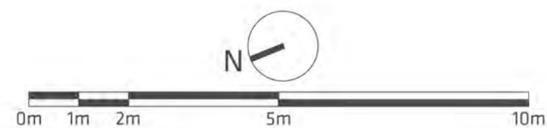
Legenda:

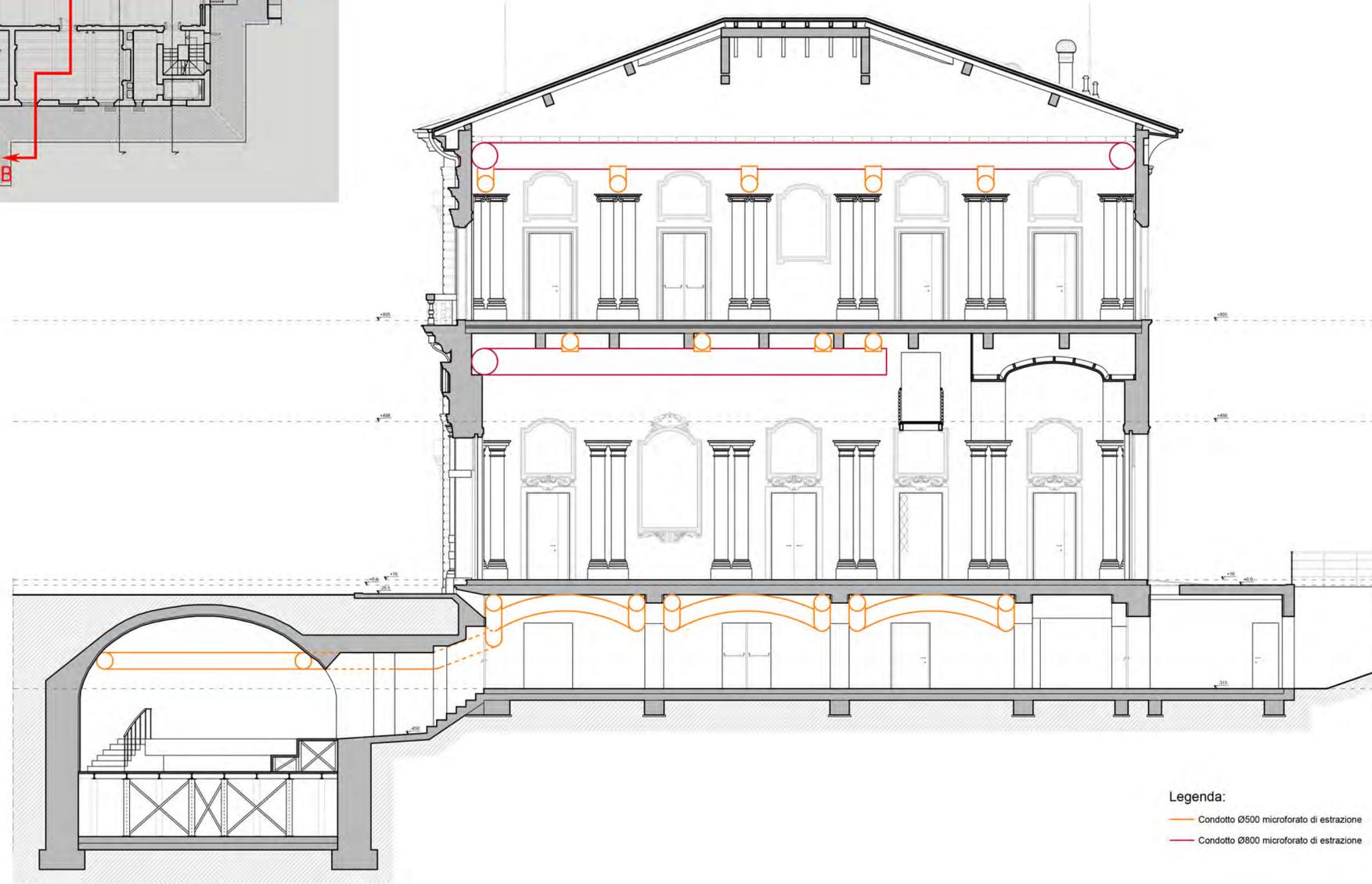
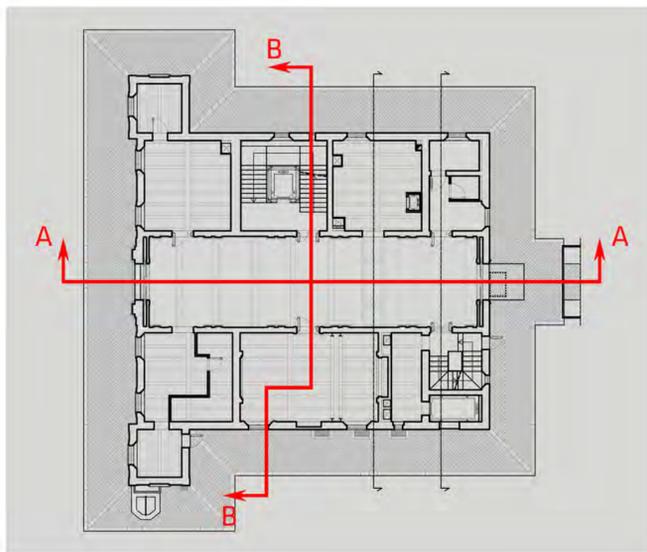
- Montante di immissione
- Condotto 610x350 microforato di immissione
- Condotto Ø800 microforato di immissione
- Condotto Ø500 microforato di immissione
- Condotto 600x350 microforato di immissione
- Montante di estrazione
- Condotto 610x350 microforato di estrazione
- Condotto Ø500 microforato di estrazione
- Condotto Ø800 microforato di estrazione
- Condotto 600x350 microforato di estrazione



Legenda:

- Montante di immissione
- Condotto Ø500 microforato di immissione
- Condotto Ø800 microforato di immissione
- Montante di estrazione
- Condotto Ø500 microforato di estrazione
- Condotto Ø800 microforato di estrazione

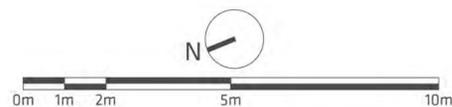


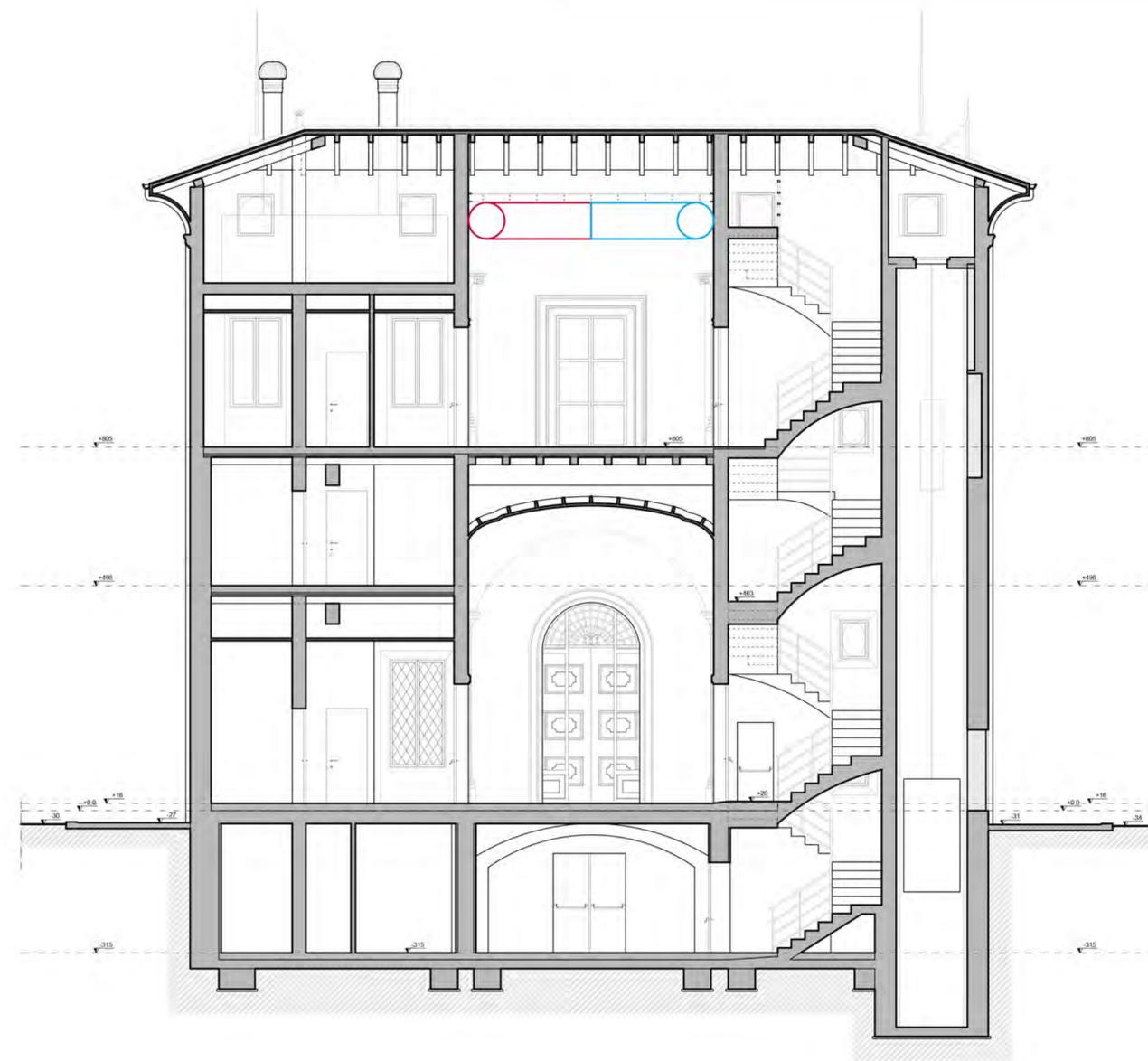
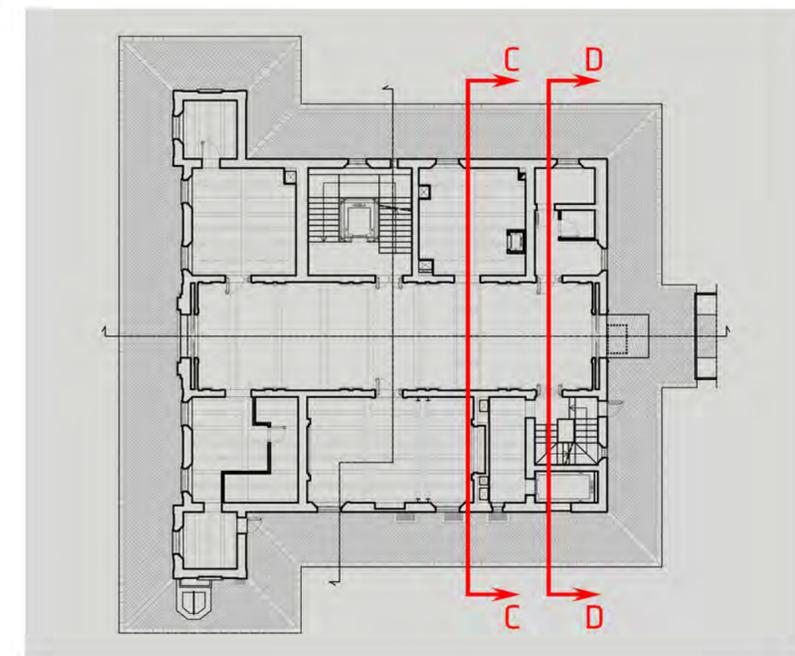
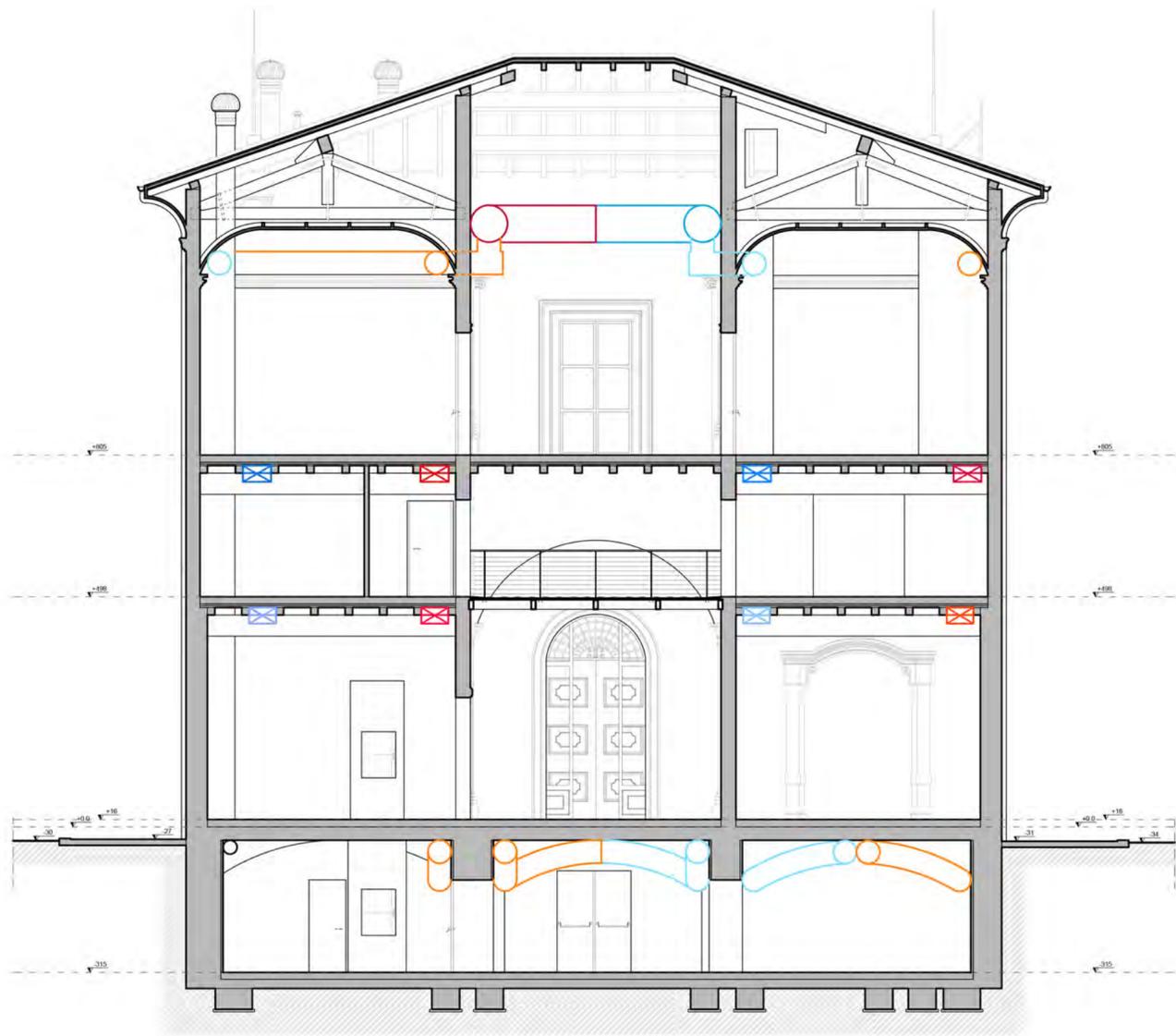


Legenda:
 — Condotto Ø500 microforato di estrazione
 — Condotto Ø800 microforato di estrazione



Legenda:
 — Condotto Ø500 microforato di immissione
 — Condotto 575x350 microforato di immissione
 — Condotto 600x350 microforato di immissione
 — Condotto Ø800 microforato di immissione
 — Condotto Ø500 microforato di estrazione
 — Condotto 575x350 microforato di estrazione
 — Condotto 586x350 microforato di estrazione
 — Condotto 600x350 microforato di estrazione
 — Condotto 610x350 microforato di estrazione
 — Condotto Ø800 microforato di estrazione



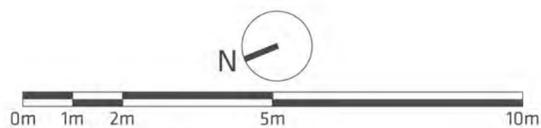


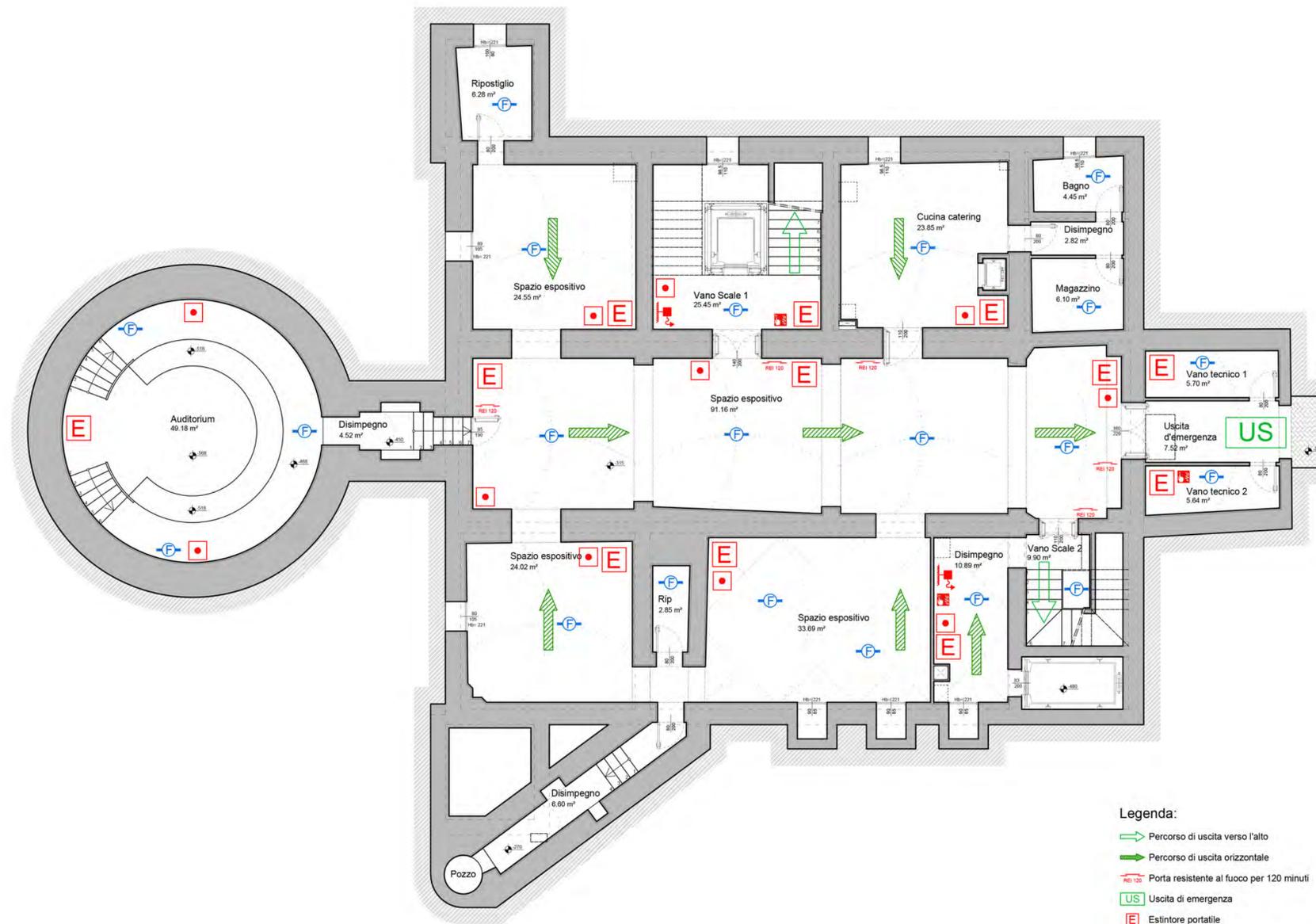
Legenda:

- Condotto Ø500 microforato di immissione
- Condotto 575x350 microforato di immissione
- Condotto 586x350 microforato di immissione
- Condotto 600x350 microforato di immissione
- Condotto 610x350 microforato di immissione
- Condotto Ø800 microforato di immissione
- Condotto Ø500 microforato di estrazione
- Condotto 575x350 microforato di estrazione
- Condotto 586x350 microforato di estrazione
- Condotto 600x350 microforato di estrazione
- Condotto 610x350 microforato di estrazione
- Condotto Ø800 microforato di estrazione

Legenda:

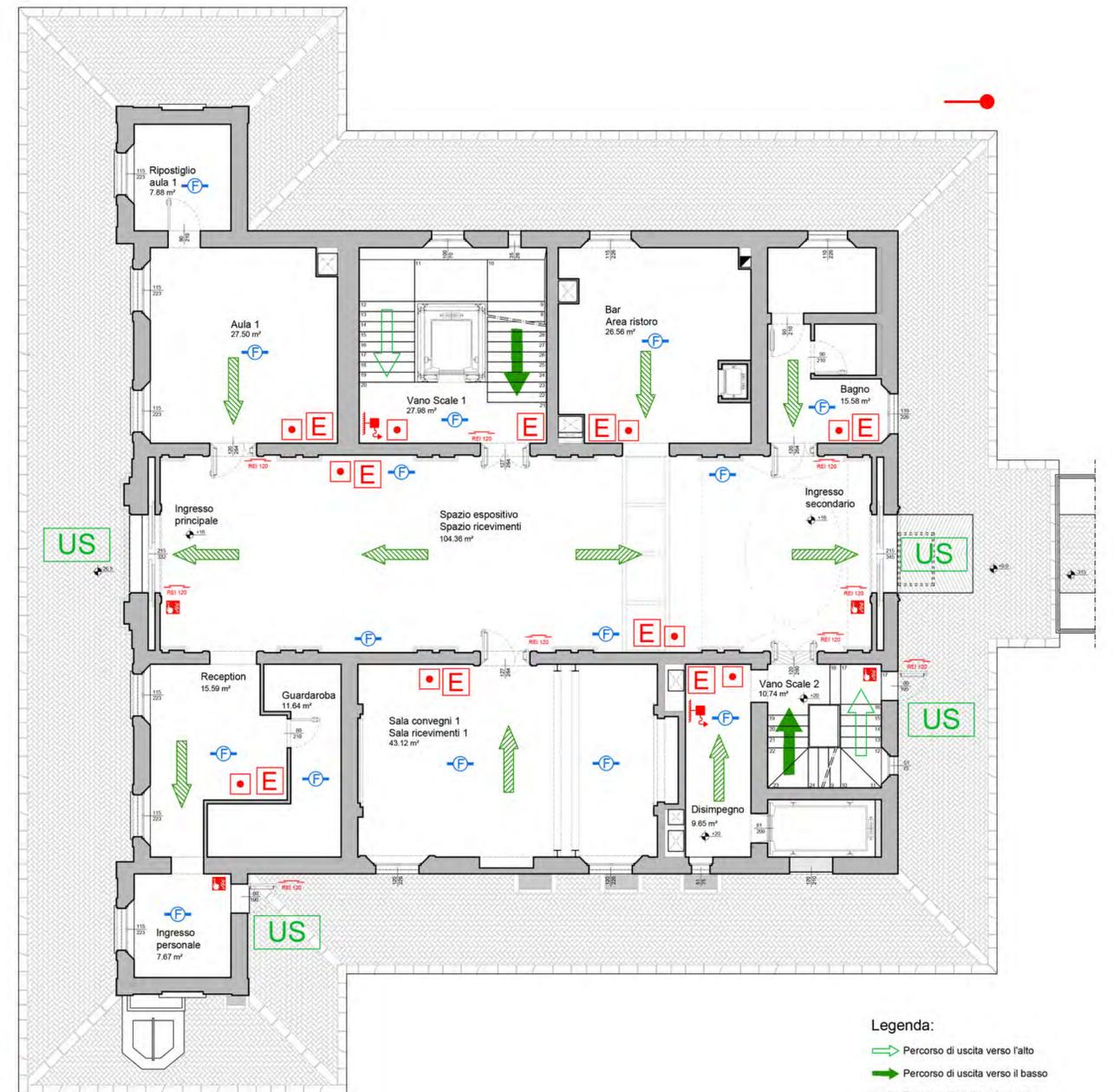
- Condotto Ø800 microforato di immissione
- Condotto Ø800 microforato di estrazione





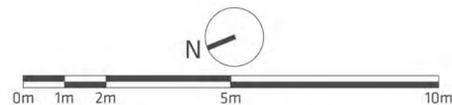
Legenda:

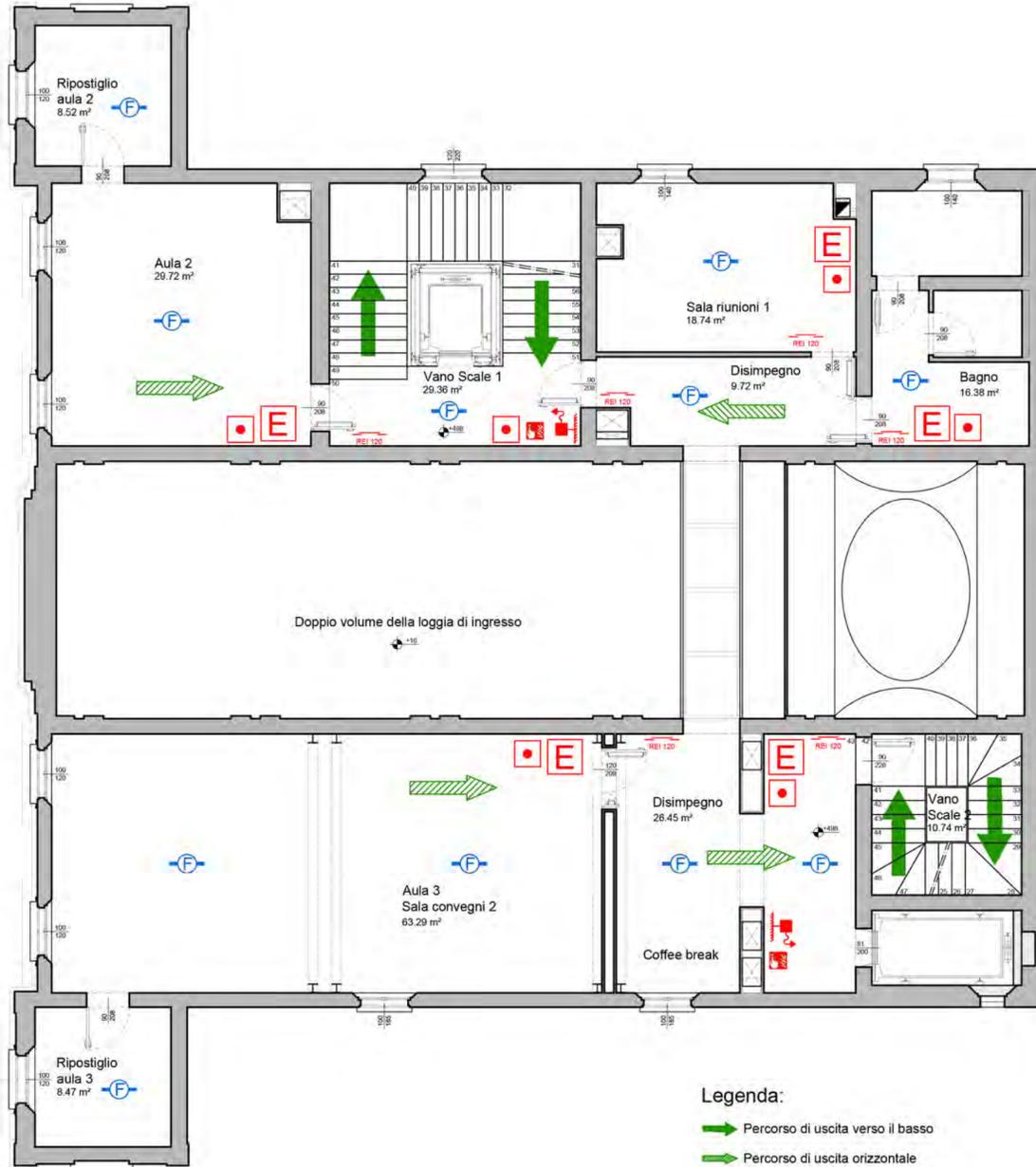
- Percorso di uscita verso l'alto
- Percorso di uscita orizzontale
- Porta resistente al fuoco per 120 minuti
- Uscita di emergenza
- Estintore portatile
- Idrante a naspo UNI 25 a parete
- Pulsante manuale rivelazione incendio
- Pulsante sgancio corrente elettrica
- Rivelatore di fumo



Legenda:

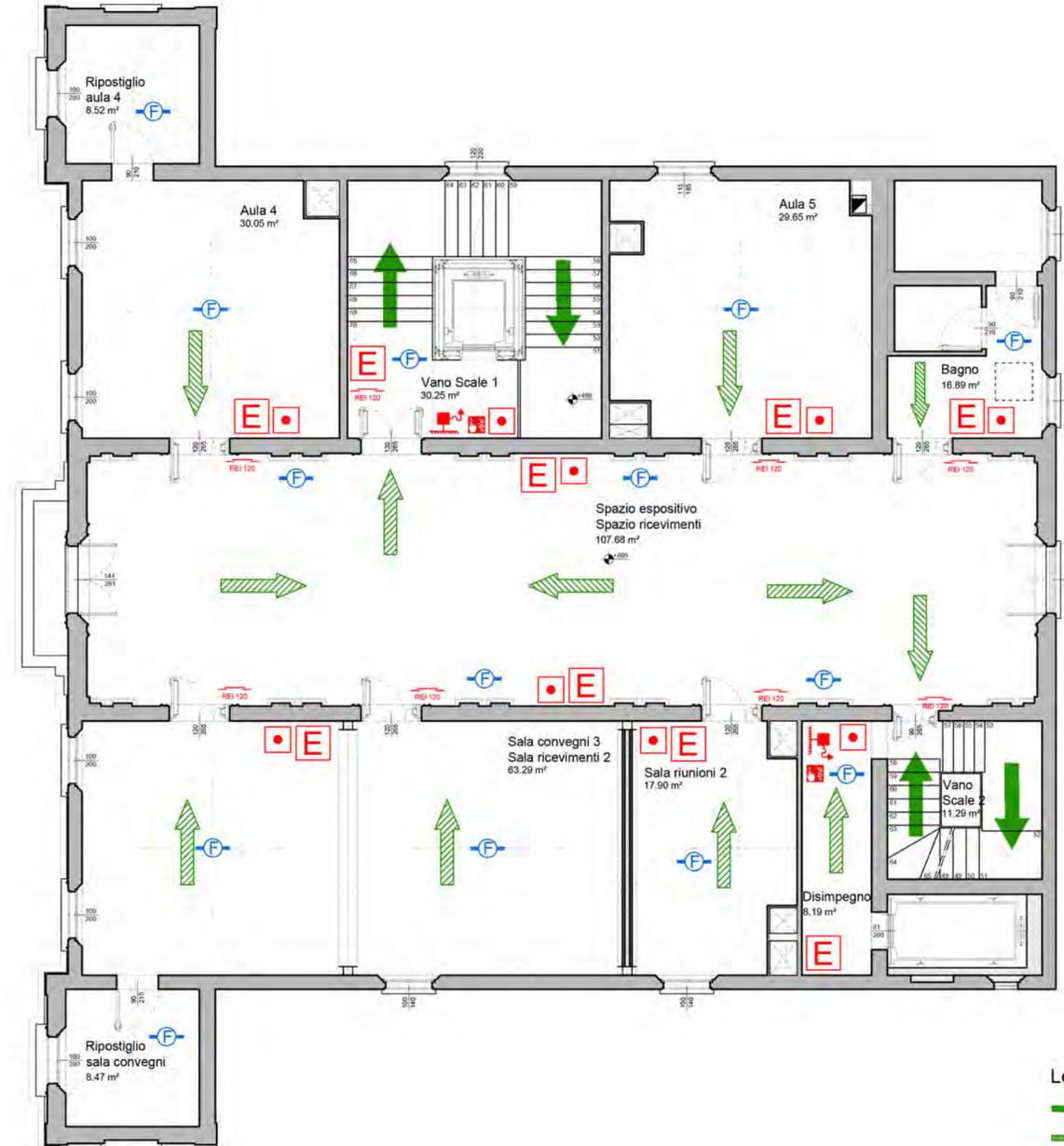
- Percorso di uscita verso l'alto
- Percorso di uscita orizzontale
- Porta resistente al fuoco per 120 minuti
- Uscita di emergenza
- Estintore portatile
- Idrante a naspo UNI 25 a parete
- Pulsante manuale rivelazione incendio
- Pulsante sgancio corrente elettrica
- Rivelatore di fumo





Legenda:

- Percorso di uscita verso il basso
- Percorso di uscita orizzontale
- Porta resistente al fuoco per 120 minuti
- Estintore portatile
- Idrante a naspo UNI 25 a parete
- Pulsante manuale rivelazione incendio
- Pulsante sgancio corrente elettrica
- Rivelatore di fumo



Legenda:

- Percorso di uscita verso il basso
- Percorso di uscita orizzontale
- Porta resistente al fuoco per 120 minuti
- Estintore portatile
- Idrante a naspo UNI 25 a parete
- Pulsante manuale rivelazione incendio
- Pulsante sgancio corrente elettrica
- Rivelatore di fumo

